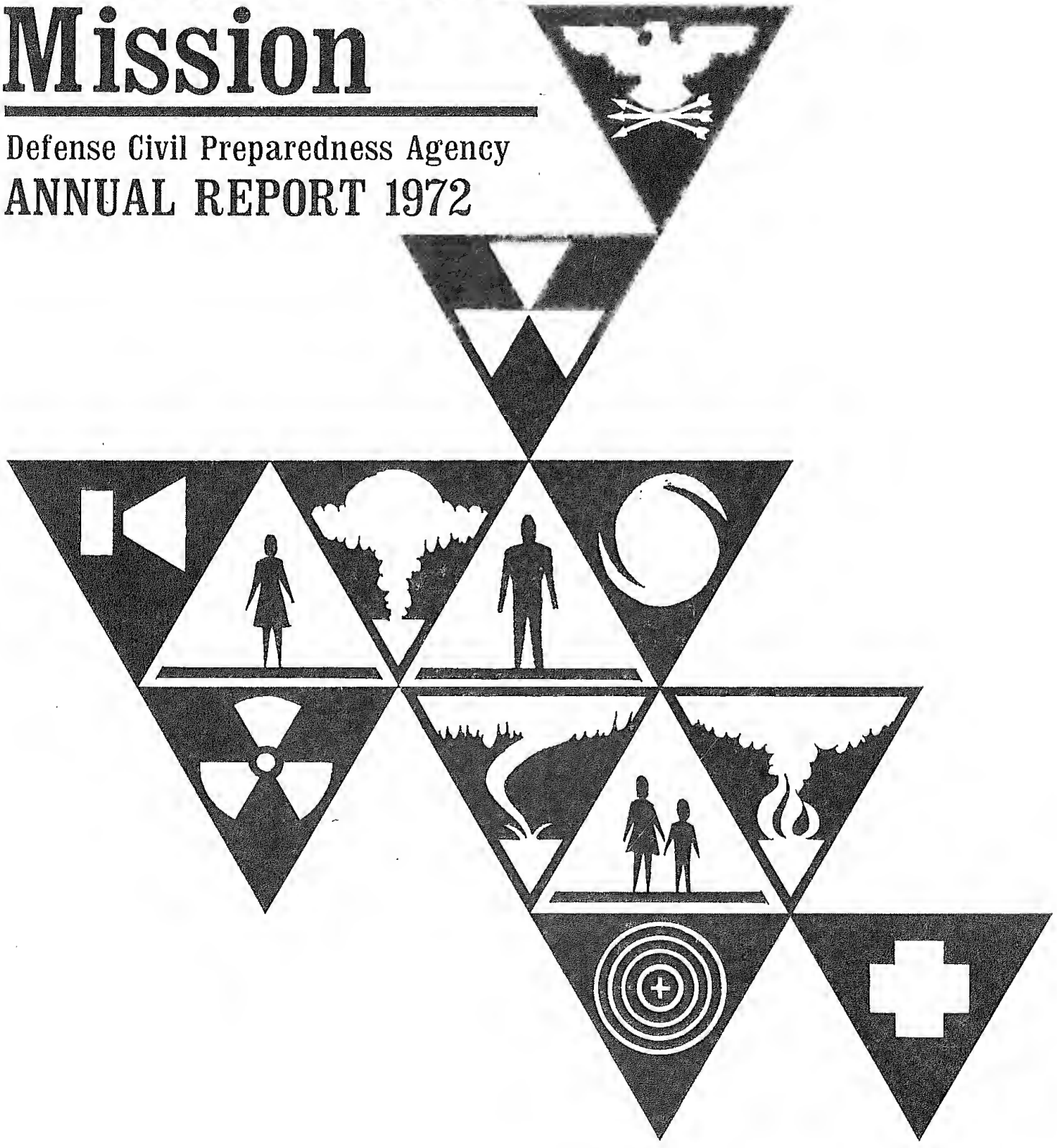
Civil Preparedness -- A New Dual Mission

Defense Civil Preparedness Agency

ANNUAL REPORT 1972



ANNUAL REPORT FY1972

Civil Preparedness -- A New Dual Mission

Defense Civil Preparedness Agency

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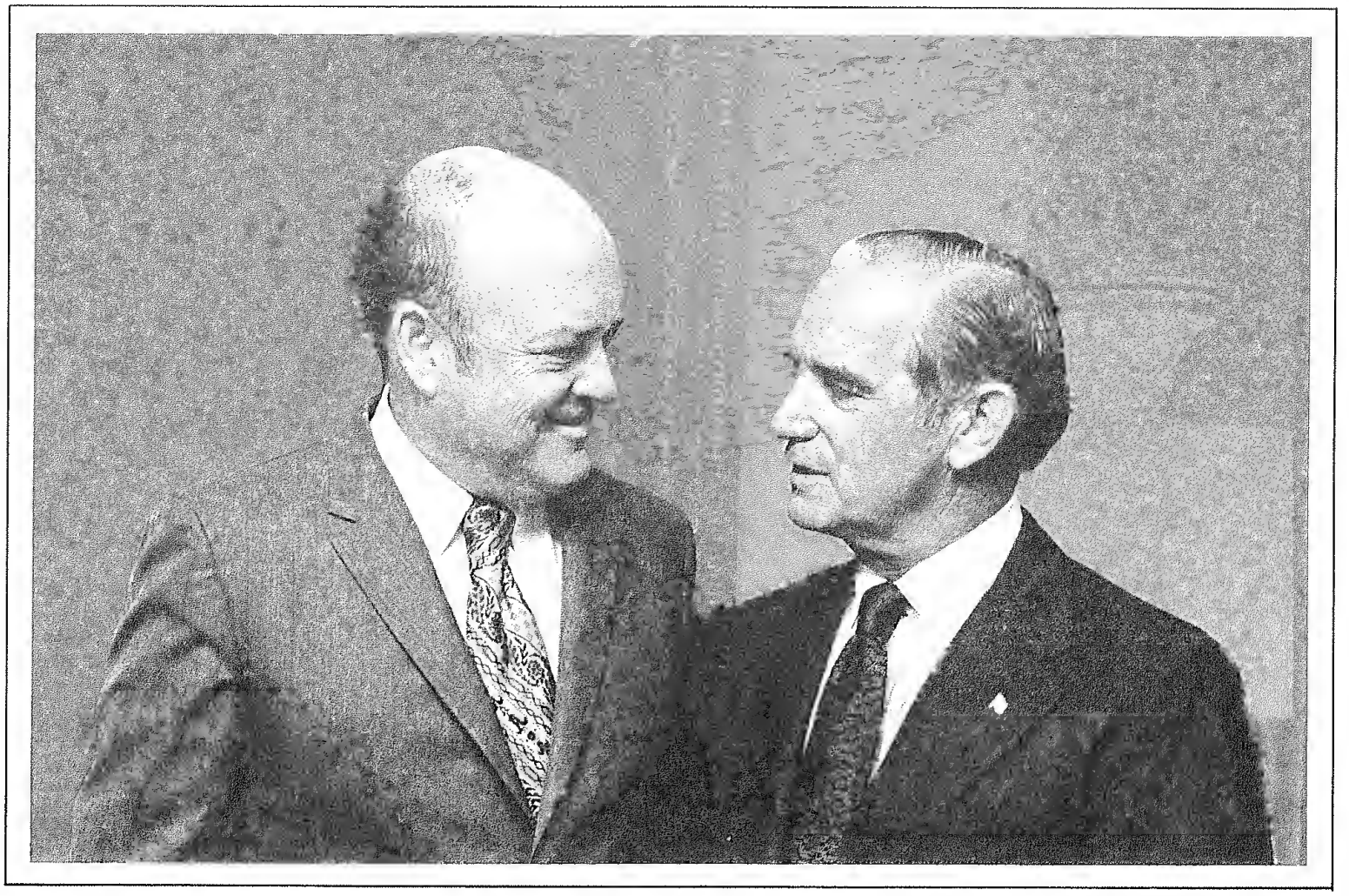

Melvin R. Laird

John E. Davis

LETTERS OF TRANSMITTAL

Department of Defense
Defense Civil Preparedness Agency

December 15, 1972

MEMORANDUM FOR THE SECRETARY OF DEFENSE

The first annual report of the Defense Civil Preparedness Agency is attached.

The report emphasizes relevance of Civil Preparedness Programs to the pressing daily needs of counties, towns, and cities in coping with the dangers of today's world—in addition to providing defense against the effects of nuclear attack.

JOHN E. DAVIS

The Secretary of Defense

January 8, 1973

MEMORANDUM FOR THE PRESIDENT

In compliance with section 406 of the Federal Civil Defense Act of 1950 and section 5 of Executive Order 10952 of July 20, 1961, I submit herewith the first annual report of the Defense Civil Preparedness Agency, covering civil defense functions assigned to me.

MELVIN R. LAIRD

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New Needs and New Responsibilities

". . . the Defense Civil Preparedness Agency can make a significant contribution to total civil disaster preparedness. Civil defense preparedness planning and natural disaster planning are often similar if not identical. This new Agency will stress the dual capability and utility of civil defense preparedness and natural disaster preparedness at local government level in the broader term of civil preparedness as depicted in the Agency title."

MELVIN R. LAIRD
Secretary of Defense

In the late 1950's and early 1960's, "civil defense" became a household term. To nearly everyone it meant preparation to cope with the effects of attack. For a long time it brought to mind hardhats and CD armbands. The image was World War II vintage.

Civil defense has come a long way since then. Today, "civil defense" really is preparedness to meet a full range of emergencies and disasters in peacetime as well as providing preparedness against the effects of nuclear attack. Today, we face a new world—with new needs and new responsibilities for the public safety.

In the complex world of today, civil preparedness must become more and more an essential element of our society. It must be useful every day, and not just a standby program, to be used in the event of an enemy attack. The way toward readiness for any eventuality is to prepare every U.S. community as fully as possible to meet the dangers of peacetime disasters. This also lays the solid foundation for emergency operations in event of an enemy attack.

In time, "civil preparedness" is expected to become a household term—replacing "civil defense" in the American consciousness as a more meaningful and tangible expression of the responsibility of Federal, State, and local government for the safety and protection of the public.

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THE PROGRAM

In recognition of the greater need for preparedness to meet the full spectrum of disaster, the President's Office of Emergency Preparedness and the Office of Civil Defense (now the Defense Civil Preparedness Agency) agreed in early 1972 to an expanded role for the Office of Civil Defense (OCD) in assisting local governments plan and prepare for peacetime disasters, and act when they occur. (See app. A.)

In further recognition of the broader responsibility of the Federal Government in disaster preparedness assistance at the State and local government level, Secretary of Defense Melvin Laird, on May 5, 1972, abolished the Office of Civil Defense, which operated under the Secretary of the Army, and established a new, separate Defense Agency within the Department of Defense—the Defense Civil Preparedness Agency (DCPA). John E. Davis, Director of the former OCD became Director of the new DCPA, reporting directly to Secretary Laird. (See app. B and C.)

Addressing the Governor's Industrial Preparedness Conference held in Minneapolis, Minn., on May 18, 1972, Director Davis said:

> "Through a recent agreement with the President's Office of Emergency Preparedness, we're now responsible for helping communities plan and prepare for peacetime disasters. This is a cooperative responsibility we've long worked for in the Defense Department.
>
> Just two weeks ago, with the full support of Secretary of Defense Laird, civil defense at the Federal level attained new stature. The Office of Civil Defense became the 'Defense Civil Preparedness Agency,' a separate and distinct Agency within the Defense Department. This change is in keeping with President Nixon's desire to make the Federal Government more responsive to the needs of State and local governments. It brings government closer to the people."

Total Preparedness Goal

The program of the new Defense Civil Preparedness Agency takes into account all of the hazards and dangers which confront the Nation's population today. The program changes include:

—enhancement of State and local capability in attaeks and other disasters;

—reorientation of the program to emphasize, wherever possible, available protection from nuclear weapon effects and natural disasters;

—shifting of some on-going programs to systems that would only be implemented in a crisis in

order to reduce peacetime costs and prevent rapid obsolescence.

Major elements of the new program include (a) maintenance of the current shelter system, but reorienting marking, stocking and home survey programs toward crisis implemented activities; (b) for shelter survey, creation of State Engineer Support Groups to give participating States the in-house capability to replace Federal Engineering Support currently provided; (c) use of analytical techniques to determine the most likely hazards for each community in the event of nuclear war, e.g., blast, fire, fallout; and (d) development of guidance for local governments based on risk analysis, to include evacuation planning guidance for high risk areas.

Program Responsibilities

Programs of the Defense Civil Preparedness Agency are based on the Federal Civil Defense Act of 1950, Department of Defense Directive 5105.43, an agreement with the Office of Emergency Preparedness (OEP), and Executive Order 11575, based on the Disaster Relief Act of 1970. (See app. A, C, and D.) The Defense Civil Preparedness Agency acts for the Secretary of Defense in developing and administering the overall National Civil Defense Program including:

1. A shelter program including evacuation and movement to shelter;
2. A civilian chemical, biological, and radiological warfare defense program;
3. Development and operation of civil preparedness warning or alerting, and communications systems;
4. Planning for emergency assistance to State and local governments in a postattack period;
5. Guidance and assistance to State and local governments to increase their protection and emergency operations capability;
6. Programs for financial contributions and donation of Federal surplus property to the States for civil preparedness purposes;
7. Developing systems to conduct nationwide assessments in event of attack to determine: (a) The nature and extent of damage, (b) surviving resources, and (c) specific hazards resulting from the detonation or use of special weapons;
8. A system for warning affected Federal activities, State and local governments, and the civilian population of impending disasters;
9. Providing planning assistance to local governments in their development of disaster preparedness plans and capabilities; and
10. Establishment and administration of a Civil Preparedness Advisory Committee to serve the Secretary of Defense.

In support of the foregoing responsibilities which are developed and executed in coordination with Federal, State, and local governments, DCPA conducts the following programs: Research and Development, Training and Education, Information Services, Emergency Information, and Liaison Services. DCPA also advises the Secretary of the Army on military support to civil preparedness; is represented at Headquarters, North American Air Defense Command (NORAD), and at Headquarters, U.S. Continental Army Command (CONARC); and participates in emergency exercises involving elements of the Department of Defense (DoD) and other Federal agencies, and State and local governments.

The Defense Civil Preparedness Agency is organized as a separate and distinct Agency of the Department of Defense, and is civilian in character and direction. DCPA Headquarters is located in the Pentagon. In addition, there are eight DCPA Regional Offices, located at Maynard, Mass.; Olney, Md.; Thomasville, Ga.; Battle Creek, Mich.; Denton, Tex.; Denver, Colo.; Santa Rosa, Calif.; and Bothell, Wash. There is also a DCPA Staff College at Battle Creek, Mich. (See app. E and F.)

Joint Responsibility

In attaining program objectives, DCPA works closely with State and local governments in developing their capability for taking effective action in time of emergency. This is in keeping with a declaration in the Federal Civil Defense Act that the responsibility for civil defense "shall be vested jointly in the Federal Government and the several States and their political subdivisions."

In addition to the close relationships on emergency functions maintained with the Office of Emergency Preparedness, Executive Office of the President, DCPA works with some 30 other Federal Departments and Agencies that have emergency preparedness responsibilities assigned by Executive order.

Liaison, including contractual arrangements for certain civil preparedness activities, is maintained by DCPA with the National Association of State Civil Defense Directors, the United States Civil Defense Council (local membership), and various other technical and professional advisory groups.

In addition, DCPA receives timely and effective active support from the Armed Services. All Services have recognized the need for a strong civil prepared-

ness program, and have developed comprehensive survival and recovery plans to assist civil authority in the event of natural disaster or enemy attack.

The Army has primary responsibility for providing military support. The Commanding General, U.S. Continental Army Command, and Continental U.S. (CONUS) Army Commanders provide planning guidance to State Adjutants General in the preparation of military support for civil preparedness plans in each of the 48 contiguous States. In Alaska, Hawaii, and Puerto Rico similar plans are developed by the appropriate unified command and the State Adjutant General. Current plans call for each Adjutant General, when called to Federal service as a State area commander, to exercise operational control over military units made available for transattack and postattack military support missions.

During fiscal year 1972, the Army established eight civil defense support detachments to augment communications and security personnel at DCPA Federal Regional Centers throughout the country in event of enemy attack or natural disaster. In addition, mobilization designee positions for Army, Navy, and Air Force Reservists in direct support of civil preparedness activities were authorized by a Department of Defense directive. The objective of this new program is to strengthen the emergency capabilities of civil authority at Federal, State, and local level by augmenting civil preparedness staffs with qualified Military Reservists.

Partners in Preparedness

In the civil preparedness program, DCPA works with the 50 States, Puerto Rico, the Canal Zone, the Virgin Islands, Guam, American Samoa, and the District of Columbia; and through the States, with more than 3,000 counties or parishes, and approximately 10,000 local governments.

There were 5,798 full- or part-time State and local civil preparedness personnel in fiscal year 1972, paid with the help of Federal matching funds. Many additional State and local government employees and auxiliaries also served in the program.

Disaster threats in our society today are a growing and pressing problem. An unchanging goal of DCPA is to save human lives and protect property in disaster—whether the disaster be nuclear, natural, or manmade.

Assisting State and local governments in planning and preparing against natural and man-caused disasters *before* they occur is a major mission of DCPA. During the year, there were many local preparedness plans established—and as the need occurred—put into effect. Among them:

1. *Roundup, Montana.*—When they named this rural community for what it was—a roundup location for cattle being herded along the Musselshell River in Montana's eastern plains—the term "power" usually meant "manpower" to the people of the area. For the most part, the people were self-reliant.

Today the people haven't changed much. A man is still expected to shoulder his own responsibilities, handle his own problems. But now there are a few more people, a little larger chunk of that thing called "civilization." And along with the change came the blessing—and sometimes the problem—of electric power.

Roundup, Montana, in Musselshell County, a community of 5,000 people, is in its own way, a part of the plugged-in society of America, a society highly dependent upon electricity.

Roundup has solved a large part of its "lights out" problem. The solution came with the assistance of the Defense Civil Preparedness Agency and the Contributions Project Loan Program. James T. Ross, Director of Musselshell County Civil Defense, explains.

"In our part of the country, the long winter storms, with their high winds and deep snow, plus the heavy frosts of the late fall lasting even into early summer, take an annual toll of our power and communications lines. For some time, we tried to get an auxiliary power generator, especially for emergency use at our 50-bed hospital, our town water system, and at our Civil Defense Emergency Operating Center at the Western Coal Mine about nine miles south of Roundup, which is also the location of our community shelter. The trouble was that, in our small community, we never had enough money to buy a generator. Then I learned of DCPA's participation in the Contributions Project Loan Program, and I moved quickly."

The result was that, with the personal assistance of staff members of Montana State Civil Defense and the DCPA Region 8 Office, a 100 kw generator was located as part of "excess property" at McClellan Air Force Base, Sacramento, Calif. DCPA took title to the generator and placed it on loan with the State of Montana for use by Musselshell County Civil Defense.

Musselshell County paid $800 to transport the $20,000 generator from Sacramento to Roundup, mounted the generator on a truck bed, and now the generator is ready for emergency use whenever and wherever needed in the community. It is tested each week as an emergency power source for the Roundup water system.

Director Ross was among the first to take advantage of DCPA's assistance under the Contributions Project Loan Program to obtain an emergency generator. Soon after the start of DCPA's participation in the program, he was joined by State and local civil defense officials from Florida, Georgia, Tennessee, California, Iowa, Missouri, Virginia, West Vir-

ginia, Nevada, and Hawaii in obtaining emergency generators ranging in power from 10 kw to 150 kw.

The program is growing, and its need is evident by the mounting problem of maintaining the availability of electric power throughout the Nation. It's a problem not only of storms and other sudden emergencies that knock out electrical service, in addition, utilities are having trouble just keeping up with the increased demands for power, even though they're spending billions of dollars in the effort.

DCPA Director John E. Davis has instructed all DCPA Regional Offices to work closely with all State civil preparedness officials in obtaining needed property under the loan program—a program with real potential as a modern nationwide roundup for emergency readiness.

2. *Battle of the Barge.*—A real-life application of emergency operations took place recently at Louisville, Ky. Grave danger to thousands of people was posed when a barge laden with liquid chlorine broke loose from its tow and lodged in the McAlpine Dam on the Ohio River.

Deadly chlorine gas could have escaped during salvage operations and covered a wide area. The threat was met with concerted action by civil government, private organizations, and the military.

Highlights of carefully coordinated operations by all concerned with the public safety included:

- Development of an operations plan by officials of threatened communities.
- Use of Emergency Operating Centers (EOC's) as the nerve centers for overall operations.
- Evacuation of nearly 4,300 persons from the area of greatest danger. This movement of whole families was carried out with complete success, and everyone was returned safely home within 24 hours.

The President's Office of Emergency Preparedness assumed leadership in coordinating the planning and emergency actions of Federal, State, and local agencies involved in this incident. The U.S. Coast Guard District Commander was responsible for direct coordination of the on-river operation.

News media representatives were integrated into overall emergency operations, with continuous contact arranged with key officials. The result was release of timely and accurate accounts of what was taking place. This held rumors to a minimum and gave panic no chance to start.

Because civil defense preparedness concepts and organization were applied, the entire operation was brought to a successful conclusion.

The basic objective of civil defense preparedness was achieved: no lives were lost, and there were no reported injuries.

Paying for Preparedness

In addition to the funds expended by State and local subdivisions, Federal funds available during fiscal year 1972 for carrying out Defense Civil Preparedness Agency operations totaled approximately $85.0 million of this amount, $78.3 million of new fiscal year 1972 appropriations; $6.3 million carried over into fiscal year 1972 from prior year appropriations; $0.2 million unobligated balance transferred from other accounts; and $0.2 million in reimbursable orders from other agencies. Of this total, $1.3 million was reserved to finance part of the fiscal year 1973 program.

Appendix G—Table 1 shows the planned application of the Federal funds programed for obligation in fiscal year 1972, and the actual obligations for specific activities. The Defense Civil Preparedness Agency obligated $80.9 million, or 97 percent, of the $83.7 million programed for obligation.

Meeting The Threat

"It seems to me that a disaster is a disaster, whether it be nuclear or natural, and it takes the same kind of organization, skill, and participation to deal with either."

CONGRESSMAN GLENN R. DAVIS
Waukesha, Wisconsin

The emergency preparedness mission is vastly intricate and may be considered on four levels of interlocking responsibility: (1) The individual is responsible for prudent actions to take care of himself and his family, as well as his responsibilities as a citizen; (2) local community government is a proper part of emergency preparedness and response; (3) State government has its inventories of resources that can be brought to bear as appropriate; and (4) the Federal Government provides leadership, guidance, and assistance.

Civil preparedness in the United States must be relevant to the pressing daily needs of counties, towns, and cities—as well as providing a deterrent and defense against the effects of nuclear attack. Disaster first impacts on people, and then on local government, which must respond. The local government stands alone during those first hours or perhaps days; and it is during this initial period of time when communications, decision-making, emergency systems, and preparedness planning pay off in lives and property saved. Any local government capable of coping with peacetime emergencies is a long way down the road in its capability to deal with the effects of nuclear attack.

ON-SITE ASSISTANCE

Building on studies of the status of local operational planning and readiness conducted in prior years, a technique and program were developed for providing on-site assistance in local communities during fiscal year 1972. On-Site Assistance is the top priority program of the Defense Civil Preparedness Ageney. The program is designed to help local governments (eounties, cities, towns) assess their existing level of readiness to conduct coordinated operations in both peacetime and attack-caused emergencies, and then to take specific steps to improve their emergency readiness. The program involves direct on-site effort by teams of State and DCPA Regional professionals working with local officials.

The On-Site Assistance Program requires that civil preparedness be viewed as a total preparedness effort. This totality is made up of many parts: some are tangible, such as rescue vehicles and emergency operating centers. Others, such as planning, attitudes, and motivation, are intangible. On-site assistanee aims at helping localities tie together their existing assets, both tangible and intangible, into the ability to eonduct emergency operations. Thus, on-site assistance is basically a people-oriented program, emphasizing planning, organizing, training, and exercising; and requiring some shift in approach and attitude from the more hardware-oriented programs of the 1960's.

By the elose of fiscal year 1972, on-site visits by joint Regional DCPA/State civil defense teams had been made or were scheduled for 213 localities in 41 States and Puerto Rico.

FEDERAL WARNING

Warning

Federal warning systems are designed for passing warning to strategic points from which State and local governments are responsible for warning the public. A Civil Defense Warning System (CDWS) is operated throughout the continental United States, and Alaska. This system interconnects Federal, State, and local warning systems in a single warning network. Separate warning systems serve Hawaii, American Samoa, Guam, Puerto Rico, and the Virgin Islands.

National Warning System (NAWAS)

The Federal portion of the CDWS is the National Warning System (NAWAS). Almost instantaneous attaek warning information can be disseminated to State and local warning points from three national warning centers continuously manned and operated for DCPA by U.S. Army Strategic Communications Command (USASTRATCOM) warning officers. The primary National Warning Center is in Cheyenne Mountain, Colorado Springs, Colo. The other warning eenters are located at Denton, Tex., and in the Washington, D.C. area. The system includes 297 warning points at Federal installations throughout the United States; and 870 State and local warning points, for a total of 1,167 as of June 30, 1972. (See app. H.)

Severe weather information generated within a given State is disseminated by government officials within the same State by NAWAS and across the borders of adjacent States. Approval was obtained to locate 76 NAWAS installations at various National Weather Service facilities during the fiscal year. This provides the National Weather Service with a total of 226 NAWAS installations.

A reconfiguration of the Hawaiian Warning System (HAWAS) during the fiscal year included updated telephone lines and equipment. HAWAS is used for disseminating attack warning information, tsunami watches and warning, severe weather conditions, and other data related to extraordinary emergencies. It is a dual capability system.

NAWAS demonstrated its lifesaving potential during various disasters that occurred throughout the Nation during the fiscal year. For example, in June 1972, Hurricane Agnes moved up the eastern seaboard causing severe flood damage to seven mid-Atlantic States. In Pennsylvania, the damage was described as the most devastating in the State's history. National Three Warning Center, near Washington, D.C., relayed weather reports, flash flood watches, situation reports, and requests for emergency equipment including amphibious crafts, boats, pumps, and portable power equipment which aided rescue and restoration activities. For several hours, at the height of the flood crisis in northern Virginia, National Three Warning Center served as the only link between Fort Belvoir, Fairfax county, and the city of Alexandria, Virginia, for coordination of emergency requests.

In Virginia, the prompt response to the emergency and the lack of loss of life can be attributed to a great part to the preplanning of the Virginia Civil Defense in the form of their Natural Disaster Plan. This plan, in addition to being thorough, had been exercised in December 1971. Executing the plan at this time provided for timely advanced warning of the public and the establishment of a well organized emergency operation.

Use of civil defense communications systems for natural disaster warning is in consonance with Executive Order 11575, December 31, 1970, and as amended, March 29, 1972, which prescribes that the Civil Defense Communication System will be used for natural disaster warning.

Decision Information Distribution System (DIDS)

DIDS is a low-frequency radio network which has been designed to improve and expand nationwide warning. A contract was let and construction is in progress on the first of 10 transmission facilities. This prototype facility is located at Edgewood Arsenal, Md. It will serve a 10-State area from Virginia to Massachusetts, and will be "on-the-air" early in 1973 for test and evaluation purposes.

DIDS could form the basis for automatic indoor home warning. Special low-frequency home warning receivers are under development, along with devices which could be incorporated in regular television or entertainment radios. The low-frequency transmission of DIDS could turn on these units to alert the public and provide warning information. Inclusion of the device would be optional on the part of buyers of radio and television. (See app. I.)

STATE AND LOCAL WARNING

State and local governments use a variety of communications facilities for sending warning and supplementary information from 870 NAWAS warning points to thousands of local warning points. Telephone and radio are widely used for alerting local civil defense personnel and government officials. Local warning systems include both indoor and outdoor warning devices to alert the public. The siren is a preferred common outdoor warning device—although horns, whistles, and voice sound systems are also used. Indoor warning devices include telephone, radio, and various commercial communications facilities such as public address systems and circuits for transmitting background music to public places.

The Civil Defense Warning and Alert signals are: (1) the *Attack Warning Signal*—a wavering tone or short blasts for 3 to 5 minutes, meaning that actual attack against this country has been detected. (The signal means, "take protective action immediately!"); and (2) the *Attention or Alert Signal* (option for local use), which is a steady blast or tone for 3 to 5 minutes for peacetime emergencies. (This signal means, "listen for essential emergency information.") (See app. J.)

Most State and local warning points are located within existing governmental agencies which are continuously manned, such as law-enforcement or fire department headquarters. This assures 24-hour warning coverage for the areas served by each warning point. During the year, DCPA continued to provide guidance and financial assistance to State and local governments to strengthen their warning systems. NAWAS extensions have been installed with Federal matching funds assistance at 339 locations important to local civil preparedness operations.

Local warning procedures in the community of Altus, Jackson County, Okla., which is often threatened by tornadoes, were greatly improved by incorporating the facilities of the local cable television system.

Because of the location of the community and its restricted access to "regular" commercial television programing, virtually every family in Jackson County having a television set uses cable television.

The local cablevision system programs 12 channels in the community. One of these channels is devoted to continuous weather reports displayed against a musical background. But under the special warning system, all 12 channels are used to provide severe weather warning and emergency instructions to the people. Through a special telephone line from the Civil Defense Emergency Operating Center and the cablevision station, the weather channel changes from music to voice alert, and splits to cover the other 11 cablevision channels in the area. Cards with special instructions for the people have been prepared and prepositioned at the cablevision station for visual use along with the spoken instructions from the Civil Defense Emergency Operating Center.

In addition, weather warning and emergency instructions are provided the people by radio station KWHW. Along with the cablevision and radio stations, the Jackson County Civil Defense Weather Watch Team includes local law enforcement agencies, the Altus Air Force Base weather station, 15 "ham" radio operators, and about 65 local Citizen Band radio operators, plus weather information provided by the National Weather Service Office at Oklahoma City.

EMERGENCY OPERATIONS: COMMAND, CONTROL, AND COMMUNICATIONS

Secretary of Defense Melvin R. Laird firmly believes that, to the fullest extent possible, defense resources must be used for humanitarian purposes—for the improvement of our society, as well as for its defense and security.

This concept helps the Nation's defense dollar do double duty, and reiterates the dual-use concept DCPA has advocated and practiced for a number of years. Such dual-use of civil defense preparedness equipment and manpower has proved valuable in peacetime emergencies and disasters of many kinds. Examples of dual-use resources are warning and emergency communications systems, emergency operating centers, shelters, and communitywide planning and coordinating capability.

Communications between DCPA National Headquarters, the eight DCPA Regions and the States are provided through use of the first three systems described below. These systems are operated and maintained by the U.S. Army Strategic Communications Command (USASTRATCOM), with policy guidance and requirements furnished by DCPA.

Civil Defense National Teletype System (Primary)

The Civil Defense National Teletype System is the primary system for transmitting civil defense communications between DCPA National Headquarters, a relocation headquarters, the eight DCPA Regional Offices, the 50 States, Puerto Rico, the District of Columbia, and four locations in Canada. The system was extended from Puerto Rico to the Virgin Islands during the fiscal year. The system accepts and processes messages from all teletype circuits, simultaneously providing automatic message switching between users. The automatic switching feature allows users to send messages to a single address or to a multiple number of addresses within the system. It further permits unattended service during other than normal duty hours, thereby providing continuous message switching capability to all connected terminals. (See app. K.)

Civil Defense National Voice System (Primary)

Voice communications services are provided by a combination of Automatic Voice Network (AUTO VON) circuits and dedicated, full-period, leased circuits. AUTOVON is used between DCPA National Headquarters, a relocation headquarters, and the eight DCPA Regional Offices. This gives these locations access to all AUTOVON subscribers. Circuit preemption capability has been installed for all DCPA Regional Offices. The full-period dedicated circuits provide direct lines on either a conference or individual basis between each DCPA Regional Office and its States. Because of recurring disasters, a second voice circuit was installed for the State of Texas during the year, bringing to 10 the number of States with two circuits. Hardened cable routes containing most of the voice and teletype system circuits were completed for six Federal Regional Centers during the year. (See app. L.)

Civil Defense National Radio System (Backup)

The Civil Defense National Radio System is a high-frequency radio network used for backup to the teletype and voice systems. Control facilities for the radio, voice, and teletype services are collocated with the wire voice and teletype positions to make them readily available during emergencies. During the year, the system was installed in Connecticut and Indiana, making it operational in 47 States, the District of Columbia, Puerto Rico, and the Canal Zone—as well as in an Emergency Relocation Site and the eight DCPA Regional Offices. Agreements for installation have been signed with the remaining three States, American Samoa, and Guam. (See app. M.)

State and Local Emergency Communications Planning

During fiscal year 1972, State and local governments continued to develop emergency communications plans based on DCPA guidance. This guidance provides for the most effective use of existing com-

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munications systems and recommends acquiring additional communications equipment only when clearly necessary. At the close of this fiscal year, a total of 47 States and 844 local governments had completed Communications Planning Reports.

Radio Amateur Civil Emergency Services (RACES)

During fiscal year 1972, RACES remained operational in all States, and included more than 1,900 approved State, county, and local plans. RACES is made up of amateur radio operators who perform emergency communications functions as an important supplement to State and local emergency communications operations. RACES, police, and local Citizens Band radio networks were used extensively during various natural disasters that occurred throughout the United States during the fiscal year.

Emergency Broadcast System (EBS)

The EBS is designed for use by the President to reach the public promptly with emergency information preceding, during, and following an enemy attack. The EBS plan is designed to fulfill requirements of the White House, the Office of Emergency Preparedness, and DCPA. EBS is managed by the Federal Communications Commission (FCC), in cooperation with the broadcasting industry. By June 30, 1972, 20 detailed State EBS plans plus plans for the District of Columbia and Puerto Rico had been developed and distributed by the FCC. The remaining States continued to operate under Interim State EBS Plans. By the end of the fiscal year, more than 3,000 broadcast stations had National Defense Emergency Authorizations (NDEAS) to participate in EBS.

Recordings for the Emergency Broadcast System.—The Director of the Defense Civil Preparedness Agency is responsible for the preparation and the representation of the views of the Department of Defense for EBS programing, to include directing the preparation of recordings, emergency information, and instructions for use if needed on the EBS. This responsibility was specifically assigned to him in July 1968, as director of the predecessor agency, the Office of Civil Defense.

The total number of recordings available for EBS programing at the end of fiscal year 1972, was 34, with a broadcasting time of approximately 2 hours and 36 minutes.

Broadcast Station Protection Program

Actions to tie Emergency Operating Centers (EOC's) to selected EBS stations continued during the year. Under the Broadcast Station Protection Program, key EBS stations are provided protection from radioactive fallout, an emergeney power generator, programing equipment, and a radio link to an associated EOC. This gives these protected stations the capability to remain on the air to broadcast emergency information, including that originating from the EOC during peacetime disasters and under attack conditions.

A total of 602 AM stations have been selected for participation in the program. This includes 114 stations with both AM and FM broadcasting capability. By June 30, 1972, fallout protection had been completed in 588 stations, and 569 of these had also been provided with required equipment. Emergency broadcasting from these protected stations can reach an estimated 95 percent of the population. No protection of additional stations is planned through use of Federal funds, but the present capability will be maintained.

A good example of the use of these radio facilities during natural disasters occurred in Rapid City, S. Dak. During the flooding in June 1972, the local radio station lost power but soon returned to the air using the emergency generator furnished by DCPA under the Broadcast Station Protection Program. Remote radio equipment, also government furnished, was used between the Emergency Operating Center and the radio station. This enabled the station to provide official information to the public.

Regional Emergency Operating Centers

To assure continuity of Federal field emergency operations, plans include construction of an underground Federal Operating Center for each of the eight DCPA Regions. These centers house the Regional staffs of DCPA and the representatives of other Federal Government agencies. The buildings provide substantial protection against the effects of nuclear weapons. They contain a 30-day supply of fuel, food, and other supplies and have their own water supply and power for emergencies. These centers have communications that tie all the States in their Regions into one network with the Federal Civil Defense System.

Underground centers now operational are located at Region One, Maynard, Mass.; Region Two, Olney, Md.; Region Three, Thomasville, Ga.; Region Five, Denton, Tex.; Region Six, Denver, Colo.; and Region Eight, Bothell, Wash. Construction of the Region Three center at Thomasville, Ga., was completed in February 1972. The centers for Regions Four and Seven are still in the planning and design process.

State and Local Emergency Operating Centers

An Emergency Operating Center (EOC) is a protected place where the government executive, his department heads, and other key officials can meet to direct and control operations in a community emergency. The Center is a focal point for warning and emergency communications—including emer-

gency public information. EOC's are promoted by DCPA for use in peacctime emergencies as well as in the event of nuclear attack. During fiscal year 1972, EOC's were frequently used by local governments in dealing with emergencies such as hurricanes, earthquakes, widespread fires, floods, and ice and snow storms. In many communities, EOC's are also in day-to-day use as the normal headquarters of government units such as civil defense or police or fire departments. Such dual-use is encouraged by DCPA.

Development costs of EOC's which meet Federal standards may be matched up to one-half with Federal funds. During the fiscal year, approximately $4.7 million in Federal funds were obligated for the planning, design, construction, and/or equipment of State and local EOC's. Federal standards, recommended for all EOC's and required for Federal financial assistance, include fallout protection, emergency generators and fuel, sufficient food, water, and medical supplies to maintain the emergeney staff for at least 14 days, a ventilation system, emergency communications and warning facilities and equipment, and suffieient space for the assigned staff.

By the elose of the fiscal year, a total of 3,820 EOC's had been established or were being established. Those assisted by Federal funds totaled 1,129. (See app. N.) In addition, 2,691 centers were established without Federal financial assistance. State, county, and city EOC's were a hub of activity on June 9, 1972, when as a result of cloudbursts on the eastern slope of the Black Hills in South Dakota, communities in Lawrenee, Meade, Pennington, and Custer Counties experieneed the most severe flash flood in the history of the State.

The torrential rains started in the early evening hours. Though extensive damage was experieneed in all areas, the most severe was in the Rapid City area. Total property damage has been estimated at $150 million. The flood waters hit Rapid City in the middle of the night. The darkness plus the unprecedented volume of water was responsible for a loss of more than 240 lives.

Prompt and decisive actions by the Rapid City and Pennington County officials and department heads were responsible for saving thousands of lives. Police, fire, public works, sheriff, and other governmental department personnel were involved in alerting, evacuating, and rescuing people. The South Dakota National Guard, holding summer training at Camp Rapid in Rapid City, became involved early in the evening in warning and rescue operations which continued through the night.

Emergency operations were conducted from the Pennington County EOC, and all official announcements were dispatched over the EBS station KOTA from this civil defense headquarters. The State Support Area EOC in Rapid City was used by the National Guard for its operations. The State EOC in Pierre was manned by members of the State CD staff Friday night, June 9.

The State EOC in North Dakota was manned on a 24-hour basis beginning Saturday, June 10, until the following Wednesday to keep abreast of the Rapid City flood situation. Mr. Ray Staiger, State CD Warning and Communications Officer, had been sent to Rapid City and was able to establish radio and telephone contact intermittently with the North Dakota EOC to keep them informed.

Damage Assessment

By Executive Order 10952, the Secretary of Defense has been assigned responsibility for planning and operating systems for nationwide, postattack assessment of damage following a nuclear attack. The orders also direct the Department of Defense to coordinate with the Office of Emergency Preparedness in estimating potential damage from enemy attacks. The Heads of Federal departmcnts and ageneies, with the assistanee of the Department of Defense, are directed to maintain the capability to assess damage and monitor war effects. During and after a nuclear attaek, the Federal, State, and loeal governments would receive from the damage assessment systems the neeessary information to direet emergency operations and to take effective aetions to speed recovery.

The Defense Civil Preparedness Ageney eonducts eontinuing damage assessment and vulnerability studies to meet the requirements of the Exeeutive order. It designs, develops, and operates a wide variety of computer models to produee the information that would be needed on damage resulting from possible enemy nuclear attacks. The direct effects and the radioactive fallout resulting from a nuclear attaek are estimated in accordanee with the type, size, and location of nuelear detonations. These estimates cover population and critieal national resourees. The results of these studies are used to develop more effeetive eivil preparedness programs and postures.

The National Civil Defense Computer Facility (NCDCF) is maintained by the Defense Civil Preparedness Ageney to provide the necessary computer support services for damage assessment, operations analysis, fallout shelter programs, increased readiness programs, tests and exercises, information systems, and a wide variety of management applications. The NCDCF also provides systems analysis, system design, and computer programing services for the organizational elements within the DCPA; and upon request, for State and local civil prepared-ness jurisdictions. Automatic data processing serviees are likewise furnished to DoD and other Federal ageneies on a time-available basis. Another major

responsibility of NCDCF is to maintain the numerous data bases that support the operating systems.

Emergency Information

The Defense Civil Preparedness news exchange RESPONSE, is based on the concept that examples of the responses of a local civil defense director to emergencies in his community can be of direct and lasting benefit to other communities throughout the Nation—and, as a consequence, to the security of the Nation.

Information sent in from State and local civil defense directors across the country was condensed, edited, and published. From July 1971 to June 1972, five editions of RESPONSE were published and delivered across the Nation to State and local civil defense directors, Federal agencies, and other governmental officials. RESPONSE became international in scope during 1972, as stories of civil defense accomplishments were shared with Canada and lands across the seas, namely England and Ireland. The response to RESPONSE within the civil preparedness family shows it is filling a critical need. Stories appearing in RESPONSE this year involved 74 communities, 32 States, and 3 foreign countries. The backlog of stories submitted to RESPONSE continues very high.

National recognition of excellence was accorded to RESPONSE on June 13, 1972. The Federal Editors Association judged RESPONSE first in the category of Federal newsletters of eight pages or less, published quarterly. The blue-ribbon recognition came at the Federal Editors Association ninth annual Blue Pencil Awards banquet held on June 13, 1972, in Washington, D.C., at the National Press Club.

Reaction to a RESPONSE story came from a number of directions and in various forms. A March 1971 story (There's a Bomb in Your Building) carried in RESPONSE from James W. DeLoach, Director of Richland County-Columbia, South Carolina Civil Defense was reprinted in the Civil Defence Journal of Dublin, Ireland, and then picked up again in Mr. DeLoach's hometown paper. The local editorial entitled "Remote Recognition," raised the question "The Irish, perhaps more than Columbians, appreciate the importance of Mr. DeLoach's constant warning: It can happen here". So RESPONSE—DCPA's news exchange provided the vehicle to complete the cycle; and as Mr. DeLoach wrote, "Anyway you put it, I am grateful. And it couldn't have appeared at a better time: Budget time."

Since its original publication in 1968, a DCPA publication entitled "In Time of Emergency," has continued to be the most comprehensive and the most widely circulated source of civil defense survival information for public use. It contains guidance and instructions that would help individual citizens and families save their lives and property in both peacetime and wartime disaster emergencies.

Three million additional copies of the handbook were distributed during fiscal year 1972, making a cumulative total of 23 million since its initial printing. An additional 48 thousand copies of the Spanish translation were distributed during the fiscal year, making a cumulative total of more than 327 thousand copies of the Spanish version of the handbook distributed since its original issuance in 1968.

Materials from the handbook have been adapted for use by newspapers, radio stations, and television stations to be used in the event of an emergency or during periods of increased international tension. As a result of nationwide distribution by State and local governments, this material remains available for immediate use in the hands of 90 percent of the mass media.

A brief booklet entitled "Introduction to Civil Preparedness" was developed during the fiscal year. This booklet, designed to introduce the new director to civil preparedness, outlines the origin of civil defense and current programs. It describes help available, and where and how to get it. It also has a checklist which the local civil defense director can use to assess his progress.

Information to DCPA Regions on other Federal agencies' programs applicable to civil preparedness.—In addition to the Defense Civil Preparedness Agency, a number of other Federal agencies have programs that are directly related to emergency readiness actions in local communities. With information as a key—information about these other Federal programs and procedures—DCPA Headquarters started in August 1971 to send special information packets, compiled from other Federal agencies, to its regional offices. The purpose was to provide DCPA regional staff members with a variety of informational tools to use in assisting State and local civil defense directors, especially in the DCPA On-Site Assistance Program.

In fiscal year 1972, a total of 48 special information packets were sent to DCPA Regional Offices describing specific emergency readiness program elements available from the Departments of Transportation, Justice, Commerce, Agriculture, Housing and Urban Development, Health, Education, and Welfare, Interior; the Atomic Energy Commission; American National Red Cross; U.S. Army Corps of Engineers; The Office of Emergency Preparedness; Office of Science and Technology; and the Environmental Protection Agency.

Emergency Operations Planning

This program develops practical civil preparedness doctrine and operational systems from the re-

search or concept stage to readiness for use at the State and local level, based on the results of DCPA research, operational analysis, and field tests. In addition to development of the On-Site Assistance Program previously described in this report, projects during the year included:

● *Standards for Local Civil Preparedness.*—The need for a set of agreed standards relating to the civil preparedness program has been expressed by professionals at all levels. This view is based, in part, on the fact that standards have been evolved for programs or for professional competence in areas as diverse as higher education, law enforcement, and the practice of medicine.

Accordingly, standards were developed jointly by local, State, and Federal civil preparedness professionals. These cover the organization of the program in a community; the training and professional competence needed by local civil preparedness directors, and the amount of time and effort needed to conduct a program in localities of various sizes; and standards relating to the hardware, trained people, plans, and operational readiness needed for civil preparedness.

The standards include a worksheet for analysis of local civil preparedness, and a profile on which the results of the analysis can be summarized visually. It is expected that the standards will be used for self-analysis in many localities, to identify work that should be done to increase readiness. The worksheet may also be used by On-Site Assistance teams.

A summary of the standards has been prepared for public officials. This contains more on the "why" of the program, but less on the "what" than is the case with the standards themselves.

● *Disaster Operations—A Handbook for Local Government.*—This handbook contains action checklists for 13 specific types of peacetime disasters, as well as for attack-caused emergencies. Checklists are provided for the key executives of local government, as well as for local emergency services.

The types of emergencies for which action checklists are provided range from chemical accidents and earthquakes to tornadoes and winter storms. Information is also provided that can be used as a basis for emergency advice and instructions for the public, before, during, and after an emergency or disaster.

While the primary audience for this handbook is the smaller city or county, the checklists contain material that can be useful to civil preparedness directors and other officials in larger communities, in developing the more complex plans that are needed in the larger jurisdiction. In addition to serving as a planning and operations guide for officials of local government who may be confronted with peacetime or attack-caused emergencies, the handbook may serve as a guide for local leaders who are not members of local governments, such as labor leaders, industrial plant superintendents, and Red Cross Chapter officials.

● *Civil Defense Mobilization Designee Program.*—On July 1, 1972, the U.S. Air Force Reserve and the Defense Civil Preparedness Agency instituted the new Civil Defense Military Reserve Mobilization Designee (CD MOBDES) program, developed during fiscal year 1972.

Army, Navy, and Air Force reservists—officers, warrant officers, and enlisted members of the Individual Ready Reserve, both male and female—now have the opportunity to serve as Civil Defense Mobilization Designees, with training and duty at local or State civil defense agencies or at Regional Offices of the DCPA. The Marine Corps and Coast Guard are considering such programs.

The objective of the program is to strengthen the emergency capabilities of civil government—local, State, and Federal—by augmenting their civil defense agency staffs with trained reserve MOBDES personnel. These personnel will serve as specialists on the civilian staffs of the CD agencies. In a wartime or peacetime disaster period, they will help the regular staff members carry out their emergency duties; in nonemergency periods, they will aid the agency in preparedness planning activities.

Benefits for the CD MOBDES personnel include the opportunity to earn point credit required for a satisfactory retirement year at training and duty stations within daily commuting distance of their homes, an annual 12-day training period with pay, and active duty in a wartime mobilization period in the specific job for which they have been trained. In a peacetime disaster period, a CD MOBDES could be asked by his CD director to volunteer for active duty in his civil defense job and, if he serves, would be paid for such duty.

● *Local Resources Preparedness.*—DCPA continued to design and test concepts and procedures for postattack control of life-support resources. DCPA works with Federal, State, and local governments, as well as with selected private industry representatives whose products (e.g., energy) are among the most essential to sustaining human life postattack. The principal objectives are to devise systems that would provide equitable and, at the same time, effective local resource management preparedness in all local jurisdictions of the United States. The principal participants in this preparedness are the private-sector owners and operators of the many local business outlets that supply essential life-support items and services. Recognizing the prohibitive cost of maintaining a standing Federal or other tax-supported resource management program in all localities, DCPA is intensifying efforts to enlist the voluntary, continuing participation of key lead-

ers of vital facilities and utilities in joint planning and exercising with their State and local governments, assisted also on-site by their State universities. The first such developmental projeet was launehed in New Jersey in February 1972. Partieipants are DCPA, the New Jersey State Civil Defense Agency, Rutgers University, selected eounty and local governments, and senior operating executives in seleeted industries (e.g., petroleum).

● *Computer-Assisted CSP Project.*—Researeh continued on the use of thc computer in shelter allocation planning, using The Network Allocation of People to Shelter (NAPS) computer model. Two cities—Oklahoma City, Okla., and Huntsville, Ala.—were chosen for testing of the model. Contracts with each city provide for the collection of data needed for daytime allocations, and the final analysis of computer runs to form the basis of the Community Shelter Plan. Tests also were conducted in the use of the model in nighttime (resident) allocations. Final deployment of NAPS as a planning tool for nighttime allocations is expected to take place in the fall of 1972.

● *Local Program Management System.*—The major sources of local program and financial data are the local civil preparedness program papers. These are documents submitted at the beginning of the fiscal year to aid local governments in developing, managing, and maintaining their civil preparedness programs. A new system was implemented in fiscal year 1972 separating the local program paper from reporting of statistical program information. It includes a narrative-type program paper submitted annually, and a one-page local statistical summary which may be used as often as necessary to update local data.

In addition to the 50 States, the Virgin Islands, Puerto Rico, American Samoa, Guam, and the District of Columbia, approximately 4,520 political jurisdictions, covering about 92 percent of the U.S. population, submitted annual program papers. More than 2,500 localities covering about 75 percent of the population updated their program statistics during fiscal year 1972.

Radiologieal Monitoring and Reporting Systems

DCPA continues to emphasize the importance of an effective radiological monitoring and reporting system which would be vital in the event of a nuclear attack. Knowledge of radioactive fallout patterns would be essential in assuring the safety of the general population, and in emergeney operations. During the past year, stress has been plaeed on the use of the monitoring and reporting system to help meet peacetime emergency operational requirements of States and local governments as well as industry. The increasing use of nuclear power and radioactive materials continues to raise the probability of peacetime incidents resulting in hazards to life and property. Therefore, particular interest was placed on the use of instruments, techniques, and guidance to help reduce those potential hazards.

DCPA has developed a nationwide monitoring and reporting system to provide radiological defense information to all levels of government. This system is continually being evaluated; and a revised procedure for reporting from State and Federal Regional Centers, as well as from Regions back to the States, was published during fiscal year 1971. There are three key elements in the system:

1. A monitoring capability at public fallout shelters, vital facilities, and other strategically selected locations.

2. A capability for evaluating and processing data at Emergency Operating Centers located at all levels of govcrnment.

3. A capability by each State to maintain and calibratc the radiation detection and measuring equipment used in the monitoring system.

Although initially developed for reporting radioactive fallout, the established monitoring system network and reporting procedures could be used also, at the option of State and local governments, in peacetime emergencies such as during a tornado watch, or to report on conditions resulting from hurricanes, floods, and snow storms.

Operational Monitoring.—Radiological monitoring operational sets were located at 72,848 operational locations by the close of the year. Each monitoring location meeting minimum requirements has been provided with one or more of the radiological defense operational set, CD V–777. The requirements include suitable geographic distribution, fallout protection, adequate communications, and at least two trained radiological monitors. Some of this capability is located in public fallout shelters, where shelter and operational monitoring would be performed. Some capability is located at sites of Federal agencies having civil defense responsibilities assigned by Executive Order. Other capability is located at State facilities. But the majority is located at local government facilities and at business, industrial, and private facilities designated by local government. Exploratory work is underway to tie in the monitoring network with local pollution monitoring systems.

Shelter Monitoring.—The end of fiscal year 1972 saw a total of 116,985 public fallout shelters provided with at least one radiation monitoring kit, CD V–777–1. This was a net increase of 1,875 during the year. Radiation measurements in each shelter would serve as a basis for (1) determining the best protected shelter areas in a facility, (2) de-

termining the advisability of using adjoining areas of the facility to alleviate crowding when radiation intensities permit, and (3) determining the amount of radiation exposure to be recorded for shelter occupants. Many shelters will also serve as operational monitoring locations and provide this information to local governments.

Aerial Monitoring.—All 50 States have been furnished equipment for the development of an aerial monitoring capability. A total of 465 CD V–781 Aerial Survey Meters and supporting equipment has been issued. The States have continued in the development of their aerial radiological monitoring plans. These plans are in consonance with the resources plans of the States and the North American Air Defense Command (NORAD) Plan—"Security Control of Air Traffic and Navigation Aids (SCATANA)." Aerial monitoring training courses were initiated at the Regional and State level during this fiscal year. These courses are offered in conjunction with the Civil Air Patrol (CAP) and include instructors from the Federal Aviation Administration (FAA) as well as the CAP, State aviation and civil defense organizations, and the Defense Civil Preparedness Agency.

Postattack Radiation Exposure Control.—The States have been supplied with 1,876,779 dosimeters and 76,050 dosimeter chargers for use by emergency services personnel who would conduct postattack emergency operations. The dosimeters are for exposure control through measurement of the workers' accumulated radiation exposure.

Distribution of Radef Instruments

Radiological defense instruments distributed during the year totaled 60,820 for a cumulative total of 4.1 million. The number of instruments on hand has been adequate to meet requirements for shelter and operational monitoring sets. Therefore, procurement has been for replacement parts to maintain and increase the reliability of the instruments.

Radef Equipment Inspection, Maintenance, and Calibration

Since radiation cannot be detected by the human senses, radiation detection and measuring instruments must be used for detection and monitoring. The instruments can be used to measure exposure rates and doses in shelters, and also for determining exposure of emergency workers outside shelters. To give a reliable operational capability, these sensitive instruments must be periodically inspected, recalibrated, and repaired. The 100 percent federally funded inspection, maintenance, and calibration program was continued during the year for the 50 States, the District of Columbia, and Puerto Rico.

All civil defense radiological monitoring instruments that have been distributed for emergency use are calibrated and serviced every two years at State calibration facilities. Major repairs are made at these facilities. During the fiscal year, State personnel inspected more than 735,000 instruments and repaired and/or calibrated approximately 225,000. DCPA has developed radiation devices suitable for calibrating all ranges of the radiological instruments being issued, without a significant radiation exposure to the operator. These calibrators have been made available to all States.

Radiological Engineering Services.—The retrofit of the CD V–715 Victoreen Ion Chamber Survey Instrument was continued during the year. This program implemented in fiscal year 1971, at the three Federal radef depots and each of the State maintenance and calibration facilities, involves installation of improved components, thereby increasing the calibration stability as well as prolonging the useful life of the instrument. A total of 55,969 CD V–715 instruments were retrofitted during fiscal year 1972, increasing the total number of these instruments retrofitted to 95,000. In addition, a cumulative total of 698 CD V–781 Aerial Survey Meters were retrofitted at three Federal radef depots during fiscal year 1972. The modification increases the reliability of the system under extended use.

Fallout Forecast Data

Under contract with DCPA, the U.S. National Weather Service continued to disseminate data on upper wind observations throughout the continental United States, Alaska, Hawaii, and Puerto Rico. Approximately 70 National Weather Service observatories routinely take twice daily observations of direction and speed of upper winds. This raw data is computer-processed into fallout prognosis for more than 100 points in the United States and Canada. The fallout forecast message provides information for use at 12, 18, and 24 hours after the twice-daily observations. The forecast messages are calculated for particles originating at the 100 millibar level (approximately 53,000 ft.) that fall to the ground within a 3-hour period. This information can be used at Emergency Operating Centers to develop fallout forecasts.

The American National Red Cross (ANRC)

The services of the ANRC were available to DCPA in education, training, and in advisory and operational capacities during the fiscal year. Invaluable assistance was provided to State and local officials by ANRC advisors in disaster preparedness planning and during emergency operations in natural disasters throughout the country. The ANRC continued to assist DCPA in providing fallout shelter

space in its buildings in accordance with a Memorandum of Understanding dated August 15, 1962.

The organization also continued to encourage its four area offices, field representatives, local Red Cross chapters, local organizations, and community groups in development of civil defense and disaster preparedness plans and measures. To further these efforts, an ANRC representative maintains liaison with DCPA at the national level, and there is an ANRC advisor at each DCPA Regional Office. More than 3,200 local ANRC chapters train millions of persons in first aid, home nursing, and emergency mass feeding. Persons trained in these skills are essential to civil preparedness.

Emergency Equipment

Ninety-seven communities in 24 States were aided during the fiscal year through the loan of DCPA emergency power/water supply equipment. (See app. O.)

The loans helped these local governments recover from disaster and protect the health and welfare of their residents during emergencies. In many cases, the loans enabled communities to avoid spending their limited funds for new equipment needed only temporarily. In other cases, the needed equipment could not have been obtained in time to meet the emergencies.

For the past eight years, emergency power/water supply equipment has been made available without charge to communities to help them cope with emergency situations and disaster. The equipment includes water pipe, pumps, chlorinators, purifiers and tanks, and electric generators. It is stored at 15 locations throughout the country which are managed by the Defense Supply Agency (DSA). The Defense General Supply Center (DGSC) at Richmond, Va., a field activity of DSA, is the National Inventory Control Point for the DCPA emergency equipment.

As a result of Hurricane Edith, September 1971, the City of Freeport, Tex., received the loan of two 40 kw generators. These generators provided emergency power for vital services until normal power supply could be restored.

Tropical Storm Agnes, June 1972, the largest recorded storm disaster ever to hit the mid-Atlantic States, caused record floods and widespread destruction in the States of Maryland, Virginia, Pennsylvania, and New York. Flood-damaged utilities in many communities generated urgent requests for emergency equipment. The demand for water pumps, water purification units, chlorinators, water storage tanks, and generators was so great that the supply of these items at many of the DCPA equipment storage sites in the mid-Atlantic area was soon depleted. To meet requirements, some equipment was supplied to the disaster areas from depots as far away as Kansas City, Mo., and Bastrop, Tex. In all, 272 pieces of emergency equipment and more than 2 miles of 8-in. pipe were loaned to 32 communities to help them cope with the disaster.

The devastation wrought by Agnes resulted in many requests for generators to provide emergency power for vital services. Fifty-five generators of various capacities were loaned to nine communities affected by the flood disaster.

Actual or threatened shortages of electric power in various parts of the Nation during the fiscal year required the use of DCPA generators in 14 communities; similarly, 19 communities in drought situations were given assistance through the loan of emergency water supply equipment. In addition, breakdowns during the year in 32 local water supply systems required the loan of pumps, pipe, and water purification equipment.

Although emergency equipment is loaned primarily to assist local governments in meeting water supply and electric power shortages, it is also loaned to assist them in other types of emergencies. Assistance given to the community of Sturgis, S. Dak., in the spring of 1972 is a case in point.

In order to reduce the high water level in a structurally unsound dam located about 5 miles upstream from Sturgis, six 1,500 g.p.m. pumps and 1,200 ft. of 8-in. pipe with the necessary technical assistance personnel, were airlifted to the area. The emergency equipment was flown by the Air National Guard from the DCPA stockpile at Kansas City, Mo., to Rapid City, S. Dak., where it was moved by local transportation to the trouble spot.

Inventory value of equipment loaned during the fiscal year was approximately $1.7 million. At the end of the fiscal year, equipment was still on loan to 23 States for use in 76 communities.

Tests and Exercises

Under emergency conditions, essential operational information would be needed by decision-makers at Federal, State, and local levels. They must be warned of impending disaster in order to implement their plans; they must have the necessary equipment in operating condition to take necessary action; and their planning and preparations must *work* when needed. Emergency plans must be kept up to date and ready to go. Tests and exercises are used at Federal, State and local level to determine strength and weaknesses of emergency operating capabilities, and to keep officials and the public informed of life-saving measures taken.

Fiscal year 1972 saw a continuation of the transition from Federal to local exercises which were to be scheduled in association with Federal and State support of local on-site assistance activities.

Each DCPA Region conducted its own CDEX–71 exercise in preference to a nationwide CDEX in order to accommodate State and local needs. Regions One and Two combined their exercise during September and October 1971. The other six Regions conducted exercises in November 1971. Participants totaled 68 Federal agency field offices, 48 States, 8 governors, 1,600 local governments, 30 military field commands, including CONUS Army Commands, and Civil Air Patrol Wings.

The Joint Chiefs of Staff worldwide exercise for 1972 was cancelled and DCPA's support was not required. However, DCPA National and Region Seven staff supported Sixth CONUS Army's Military Support Exercise ORBIT RED V held in California during January 1972.

The regional exercises inspired additional exercise activity such as Oklahoma City's Exercise RED BALL in February 1972 with active support of Oklahoma Gas and Electric staff, and Connecticut's State Civil Defense hurricane/flood exercise NATURE–I. A description of the Connecticut Statewide natural disaster exercise of January 29, 1972 follows:

> A violent September hurricane slammed into Connecticut late Saturday afternoon, and a full-fledged disaster existed by Sunday morning. The untimely storm, fortunately, was just on paper. This disaster was an all encompassing test of the capabilities of civil defense, including the National Guard, State Police, Department of Transportation, and public utilities emergency personnel.
>
> About 100 persons were working in State Civil Defense Headquarters at the State Armory in Hartford, and about three times that many were strategically positioned throughout the State at Civil Defense Area Command Posts, Armories, the Department of Transportation Civil Defense Emergency Operating Center, and Public Utilities Headquarters.
>
> Bridges collapsed, roads were flooded and debris-laden, dams threatened to give way, dangerous criminals escaped from the State prison, travelers were lost en route, and more than 380 persons lost their lives as a result of accidents and flooding throughout the State. By 7:00 a.m. Sunday, Governor Thomas J. Meskill and his staff took a helicopter reconnaisance trip over the area, and the Governor declared a "state of emergency."
>
> Later in the day, as further damage was assessed, the Governor requested Federal designation as a disaster area from the President, and Federal aid was sought.
>
> Seventy umpires and controllers from National Guard forces simulated approximately 250 problems during the day and judged participating personnel on reaction to emergency situations.
>
> "This is the worst disaster I've ever seen, and I was a local Civil Defense Director during the floods of 1955," stated the State Director as the exercise was nearing its end. "I certainly hope that it never becomes a reality. If, however, the State is ever faced with a real emergency of this magnitude, I feel confident that our cooperating forces can handle it with a minimum of delay and confusion. Naturally, we discovered weaknesses in some procedures, but plans are underway to improve these areas."

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Protecting The Nation's Vital Asset --- People!

"Strength at the bargaining table is provided by both a strong military capability and strong civil preparedness. Both are essential."

JOHN E. DAVIS
Director of Civil Preparedness

The Nation's strategy of Realistic Deterrence designed to move toward an era of peace is based on maintaining adequate strength, effective partnership with our allies, and a willingness to negotiate with adversaries in order to secure and preserve peace.

In going to China, the President reopened a dialogue with nearly one third of the world's population. His visit to the Soviet Union resulted in a proposed treaty which, for the first time, holds forth the promise of limiting nuclear defense systems, and an executive agreement to limit production of offensive nuclear weapons. Upon his return, the President said:

> "This series of meetings has not rendered an imperfect world suddenly perfect. . . . The threat of war has not been eliminated—but it has been reduced. Now we are making progress toward a world in which leaders of nations will settle their differences by negotiation, not by force; in which they will learn to live with their differences so that their sons will not have to die for them."

Civil defense, or the civil preparedness program as it is now called, continues to be a vital element of the President's Strategy of Realistic Deterrence. The wartime and peacetime elements of the new civil preparedness program are closely joined. One does not downgrade the other. In building a capability to deal with the dangers of the real world, a broad base that would enable the Nation to operate more effectively in event of attack is also built. Nuclear attack—the ultimate disaster—could affect most of the Nation. In the face of this threat, a strong civil preparedness program is needed to protect people from the effects of nuclear attack, and to maintain and expand preparedness technology.

SHELTER SURVEYS

Studies show that a nationwide fallout shelter system could save tens of millions of lives in event of a heavy nuclear attack. Moreover, the system in being, and as it is planned for the years ahead, provides the Federal leadership with greater flexibility in making decisions for overall national security.

During fiscal year 1972, DCPA made additional progress toward the objective of providing the entire population of the United States with shelter from the hazards which could result from nuclear attack. Methods used to attain the objective are described in the following paragraphs.

The National Fallout Shelter Survey (NFSS)

The NFSS continued during fiscal year 1972 to locate potential shelter space. As in the past few years, survey operations continued to be principally of an updating nature—confined, for the most part, to areas developing community shelter plans. The operations consisted of surveying new facilities and resurveying facilities as needed, because of renovation, construction or related reasons, and identifying and deleting facilities which had been demolished. Computerized results of the survey operations were made available to State and local planning officials to help them provide protection for people in their areas of responsibility.

During the fiscal year, an all-effects pilot survey was conducted to develop an operational procedure for including direct weapons effects protection—blast, initial radiation, and fire—into the shelter survey. Results of this study will be evaluated during fiscal year 1973 for development of an operational program.

Also during the year, contracts were negotiated with several States to fund engineering personnel to conduct State shelter surveys. This action was in keeping with the adjusted national program designed to better meet State and local needs.

An additional 9.1 million public fallout shelter spaces were located during fiscal year 1972; and the nationwide shelter inventory was increased by 6,789 facilities, resulting in a grand total of 217,171 facilities, with an aggregate capacity of about 213 million spaces.

Military Installation Surveys.—Military installation commanders are responsible for fallout shelter surveys on their installations—to determine protected spaces which may be used not only by military personnel, but also by the public in areas where entry can be permitted. Army Corps of Engineers or Naval Facilities Engineering Command personnel can be requested to assist in accomplishing military area surveys. Commanders are also responsible for preparations for effective use of fallout shelters on their installations in event of nuclear attack.

SHELTER DEVELOPMENT

DCPA administers a nationwide shelter development program. Its aim is to encourage and aid architects and consulting engineers to include shelter from natural and manmade hazards in the design of new buildings.

DCPA, with the assistance of universities, institutes, and professional societies, has qualified many architects and engineers in the technology of shelter design and analysis. These architects and engineers, through the use of appropriate design techniques, are able to realize additional protection in new buildings at little or no extra construction cost. DCPA also offers advisory services on shelter design and related guidance to architectural and engineering firms and to building owners from Advisory Service Centers located in various States. These advisory services are provided at no cost to the building owner or his architect.

Professional Development of Architects and Engineers

A total of 416 architects and engineers were trained in Fallout Shelter Analysis during fiscal year 1972. This increased the cumulative total of qualified Fallout Shelter Analysts to 21,293. The course was taught at several universities and professional schools on a semester basis, as well as by traveling instructor teams. It was also taught by the U.S. Navy Civil Engineer Corps Officer's School at Port Hueneme, Calif. As a part of this training, a special course on Protective Construction was given four times, to a total of 93 participants. This course provided emphasis on design of structures. Another special course in Environmental Engineering was offered in 11 classes, with 279 persons attending. The unique problems of shelter environment control and the procedures for solving them were the subjects of this course.

DCPA-sponsored courses in Fallout Shelter Survey Techniques were again offered during the fiscal year for undergraduate students of architecture or engineering. The course prepared them for summer employment in the Shelter Survey Program. Approximately 400 students were so employed during the summer.

The professional development courses are administered for DCPA under contract by the National Society of Professional Engineers. Exceptions are those courses conducted at the U.S. Navy Civil Engineer Corps Officer's School for practicing architects and engineers and those conducted for credit at universities and colleges for undergraduate students of architecture and engineering.

Updating Workshops for Architects and Engineers.—A series of updating workshops was held during April and May 1972 for Fallout Shelter Analysts throughout the Nation. The purpose of these workshops was to update the Fallout Shelter Analysts on developments in radiation shielding methods. In addition, special emphasis was placed on discussion of broadened DCPA programs relating to engineering responsibilities in natural disaster protection. During fiscal year 1972, a total of 1,216 fallout shelter analysts attended 56 workshops held throughout the United States.

Services to Architects and Engineers

Direct Mail Shelter Development System (DMSDS).—This program, administered by DCPA, involves use of a systematic procedure for contacting owners and architects of new buildings, to offer technical assistance for incorporating protection from natural and manmade hazards in new project design. The DMSDS uses direct-mail techniques, combined with personal contact by State or local government authorities and Professional Advisory Service Centers to assist the project designers. Contacts are made early in the design phase while there is still time to incorporate protection into the building at little or no extra construction cost. During fiscal year 1972, the DMSDS was expanded into the States of Nevada, Ohio, and South Carolina. Direct mail or personal contacts were made directly by State authorities in the States of Alaska, Arizona, Hawaii, Idaho, and Montana. A total of 47 States participate in the DMSDS.

Technical Information.—Many other means were used by DCPA during the year to offer technical information and shelter design policies and principles to architects and their consulting engineers for their building projects. The technical information was made available through 38 professional Advisory Service Centers, and through lectures, seminars, workshops—and through technical publications.

Federal Buildings.—Exeeutive Order 11490 assigns emergency preparedness funetions to Federal agencies, and requires that all Federal ageneies engaged in building construction to plan, design, and eonstruet the buildings to protect the publie against the hazards that eould result from nuclear attaek upon the United States. Federal agencies, where empowered to extend Federal financial assistanee, are to encourage reeipients to use standards for planning, design, and construetion to maximize protection for the public.

DCPA, aeting for DoD, reviews other-ageney-proposed annual design and eonstruction programs for Federal buildings. The purpose of this review is to insure that the budget estimates include provision for public fallout shelter, as required by Executive Order 11490. During fiseal year 1972, 23 Federal agencies submitted their design and construetion projeets to DCPA for review, and DCPA approved plans for provision of shelter in 79 major projeets.

During the fiseal year, DCPA assisted a number of Federal agencies prepare new instuctions to implement the Executive order. Assistanee was provided to the Departments of Health, Education, and Welfare (HEW), and Housing and Urban Development (HUD). The HEW directive included a complete chapter prepared by DCPA titled, "Environmental-Hazards Proteetion," which stresses that design against noise, vandalism, natural disasters, and other environmental hazards will also provide protection against fallout radiation. The HUD directive firmly states policy to encourage the inclusion of multiuse fallout protection space in their construction projects.

During the year, GSA initiated legislation amending the Public Buildings Act of 1959 to include the authorization for lease purchase contracts for Federal buildings which have been or will be designed with public shelter. Further impetus was given the Federal Buildings Program when the U.S. Postal Serviee agreed to include fallout shelter in their multi-billion dollar construction program launched during the fiscal year. By fiscal yearend, publie shelters in Federal buildings totaled more than 10 million spaces of the national shelter inventory.

Schools.—DCPA continued to eneourage State and local sehool offieials to ineorporate fallout shelter design teehniques in new school eonstruction. DCPA also eneouraged school offieials to plan for total protection against environmental hazards, both natural and manmade, on the proven premise that proteetion provided against any hazard will also provide protection from others.

Funded by DCPA, and in eooperation with the U.S. Offiee of Education, the Counеil of Educational Facility Planners (CEFP) eontinued during the fiscal year to produce slides, films, tapes, and other informational materials on shelter in schools. These materials are made available for use of arehitects and school planning officials nationwide from the headquarters library loeated in Columbus, Ohio.

During the year, DCPA began produeing a film showing selected schools throughout the country designed for protection from one or more environmental hazards. The film is intended to reaeh architects, school administrators, teaehers, and the general publie.

Two schools where administrators required tornado shelter as dual-use spaee are the Blaekwell, Oklahoma High Sehool; and the Nathan Hale Intermediate Sehool at Crestwood, Illinois. In both schools, the dual-use space has a third funetion of serving as fallout shelter in a nuelear disaster. This latter protection was maximized at no added eost by eareful attention to radiation proteetion factors at the same time tornado proteetion was being eonsidered.

Solutions differ at the two schools. The Blackwell, Oklahoma High School used a theater and choral and band practice space below the ground floor library and study center for its shelter. The extra-heavy overhead slab performs a fourth environmental protection function by confining unwanted noise to its below-grade souree and maintaining the quiet study environment above.

At Nathan Hale, it was not economically possible to go below ground because of a high water table. The architects simply designed a gymnasium wing with the required protection while the academic and administrative areas are of light steel frame construction with glass and steel panels. In event of emergency, the school population will seek shelter in the gymnasium wing.

LICENSING, MARKING, AND STOCKING SHELTERS

Licensing.—A fallout Shelter Lieense or Privilege form authorizes the marking of publie fallout shelters and temporary aecess by the public to speeific fallout shelter spaee in emergencies. It also authorizes storage of shelter provisions in the faeility, and inspection by government offieials.

During fiscal year 1972, lieenses were signed for 1,192 faeilities with an aggregate eapaeity for about 2.9 million persons. This inereased the grand total to 129,149 licensed facilities, with an aggregate capacity for 135.2 million persons.

Marking.—A total of 663 facilities, with an aggregate capaeity for approximately 2.1 million persons, were marked with DCPA-furnished standard fallout shelter signs during the fiseal year. This inereased the grand total to 118,264 marked facilities, with an aggregate capaeity for approximately 116.4

million persons. Posting these signs is the responsibility of State and local governments.

Stocking.—Issues of survival supplies during the fiscal year have exhausted all supplies in Federal warehouses. DCPA has decided to discontinue the Federal stocking program, except for radiological monitoring kits. Emphasis now is on the maintenance, care, and inspection of supplies at local level. Guidance has been issued to assist in this effort to preserve supplies now in place, and to dispose of deteriorating supplies as deemed necessary by local governments. Procedures for local stocking of public shelters in a crisis period were being explored during the fiscal year.

At the close of the fiscal year, the cumulative quantity of survival supplies in stocked facilities was sufficient to take care of 107.5 million persons for 8 days or 65.4 million for 14 days. These supplies are located in 105,722 facilities. In addition, during the fiscal year, 1,875 shelters were furnished with at least one radiation detection and monitoring kit, increasing the total so equipped to 116,985 facilities. By fiscal yearend, the capacity of shelters with radef kits showed a cumulative total of 118.9 million spaces. For detailed information on located, licensed, marked, and stocked facilities, see appendix P.

During fiscal year 1972, 567 thousand pounds of fallout shelter survival rations and limited quantities of other items such as civil defense sanitation and medical supplies were shipped to Pakistan under the sponsorship of the State Department, Agency for International Development and CARE, Inc.

DCPA Quality Check Program.—The major purpose of this continuing program is to inspect the supplies stored in public fallout shelters on a scientific sampling basis, and thus obtain data relative to serviceability and operational readiness. These inspections are performed by U.S. Army and Air Force Veterinary Services personnel. Inspection proeedures and results are reviewed by a veterinary officer assigned to the Director, Defense Supply Agency.

An analysis of 1,528 on-site shelter inspections made during fiscal year 1972 revealed that the overall serviceability rating of radef kits, sanitation kits, and medical kit supplies, including packaging, was excellent. The overall rating for water storage was satisfactory.

In general, the data reveal that nonperishable, nonorganic type supplies are in excellent condition and may be expected to remain serviceable for many additional years. Items most susceptible to spoilage, such as food and medications, were found to be deteriorating, but still useful. In most cases the items have remained in good condition far beyond the intended shelf-life.

SHELTER USE

Careful advance planning is required to insure effective use of fallout shelters in time of nuclear attack. To help local governments do such planning, DCPA has established the Community Shelter Planning (CSP) program.

An important end result of CSP is a set of instructions telling people "where to go and what to do" in event of nuclear disaster. Many localities also include basic instruction on how to cope with natural disasters common to the area.

Community Shelter Planning (CSP)

Community Shelter Planning and development of Emergency Operations Plans create a great amount of valuable data concerning communities. The data pertain to building types and construction, housing, traffic arteries and flow, transportation facilities and equipment, shelters and their availability to the populace, locations of radiological monitoring stations, fire and police capabilities, availability of various kinds of immediate-use resources, and many, many other significant items of information necessary to emergency preparedness. This planning is invaluable in overall community planning to deal with all environmental hazards, civil disorders, peacetime disasters, and the effects of nuclear attack.

In developing the plan in each community, people are matched with specific shelters in the best possible combination. When growth of the community or shifts in the location of the population make it necessary, the plan is revised accordingly.

In large communities, DCPA contracts with local governments or planning agencies for development of community shelter plans. At the end of fiscal year 1972, these contracts provided for the development of emergency shelter-use plans in 392 counties, with a population in excess of 110 million.

In other communities, the Federal Government makes funds available for States to obtain the services of a professional planner who serves as State CSP Officer (CSPO). The CSPO's give technical assistance to city and county governments in the development of their shelter plans. At the end of fiscal year 1972, a cumulative total of 2,190 smaller communities, with a population of approximately 58 million, had community shelter plans completed or underway.

Development of a shelter-use plan for a large metropolitan area is a complex task, requiring use of computers. Data is gathered and analyzed on locations of people and on locations and capacities of shelters. A generalized computer-allocation procedure completed during fiscal year 1970 was field

tested in Lewiston-Auburn, Maine, in fiscal year 1971. The procedure was further tested in Huntsville, Ala., and Oklahoma City, Okla., during this fiscal year. It is expected that computer assistance will be made available for CSP's for some of the larger metropolitan areas in fiscal year 1973.

An in-house task force started work in January 1972 on contingency planning for population relocation in periods of increased threat. Results of the work of this task force, and DCPA Research efforts, are expected to be applied on a pilot-project basis during fiscal year 1973.

Supporting Activities

"Preparedness is the best insurance to meet potential dangers posed by our increasingly complex and technical society. Preparedness today requires the fullest support of all sectors of the community."

GEORGIANA SHELDON
Deputy Director, Defense Civil Preparedness Agency

Building and maintaining effective civil preparedness programs require the active support of a number of vital services. They include such DCPA programs as training and education, daily information services, emergency information, industrial, labor and voluntary participation services, and research and development. These and other supporting activities are discussed in this part of the report.

TRAINING AND EDUCATION

Trained, experienced, and tested people in both the public and private sectors are essential to the development of protective measures and successful emergency operations in communities. During fiscal year 1972, DCPA supported instruction in emergency preparedness and operations in all units of government, and provided education on self and family protection to the public. Emphasis was on upgrading the professionalism of local civil preparedness officials and the conduct of local government emergency operations training involving practice in dealing with potential disaster situations.

State-Level Seminars

Consistent with the redirection effort of increasing local emergency readiness, a new program, State-Level Seminars for Local Civil Defense Directors, was launched during fiscal year 1972. A major purpose of the program is to increase the effectiveness and professional growth of the local directors. The seminars are 100 percent supported by DCPA through payment of travel and per diem expenses. During the fiscal year, DCPA conducted 56 seminars for 1,263 local directors. These seminars, also known as 3-day State-level workshops, apply recognized professional training practices, and are designed primarily for the untrained local director. Elected and other appointed local officials attend on a nonreimbursable basis.

A general plan of instruction was used as a prototype workshop, while content and structure remained flexible to meet individual requirements of the States. Participation involved the eight DCPA Regions and 36 States, Puerto Rico, and the Virgin Islands.

DCPA Staff College

A total of 1,716 persons completed 49 courses at the Defense Civil Preparedness Agency Staff College, Battle Creek, Mich., in fiscal year 1972. This brings the number of DCPA graduates to a cumulative total of 57,033. Regular courses included Civil Defense Management, Industrial Civil Defense Management, Planning and Operations, and two sequences of radiological defense courses.

During fiscal year 1972, courses were reoriented to reflect new program emphasis on civil preparedness. Instructional time was focused on peacetime disasters and on-site assistance to increase local emergency readiness.

Under the Civil Defense Career Development Program for Local Civil Defense Directors/Coordinators, 269 coordinators completed one or more courses in the four-phased curriculum during fiscal year 1972. A total of 23 persons desiring continued professional growth beyond Phase IV participated in the second Graduate Seminar held June 26–29, 1972.

Seminars and courses were aimed at specific audiences. By title, these were: Seminar on National Disaster Preparedness Planning, Civil Defense Education Seminar, Seminar for Metropolitan Area Coordinators, Seminar for Local Elected Officials, Civil Defense University Extension Program Seminar, and Emergency Operations Planning Conference.

Other courses included: Civil Defense Management/Planning and Operations (Civil Affairs), designed for U.S. Army Reserve personnel in Civil Affairs, and a Joint Emergency Operations Seminar for Civil Air Patrol at selected bases throughout the United States.

The first joint DCPA/OEP Natural Disaster course was conducted on an experimental basis.

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Representatives of both agencies shared in preparing and presenting the course. A handpicked group of civil preparedness directors with recent disaster experience participated in the pilot offering, evaluated the content, and recommended further development of material for use in a variety of training activities.

Home study development and accomplishments for fiscal year 1972 include:

(1) The updating-revision of "Civil Defense, U.S.A." to embrace natural disaster information. The revised course will be phased into the home study program during fiscal year 1973. Cumulative enrollment through fiscal year 1972 in this popular subject reached 74,000. Completion rate continues at the 35 percent level.

(2) "The Civil Defense Director/Coordinator" home study course was deployed nationwide during the fiscal year. Enrollments reached 2,949, with 1,374 completions, making a completion rate of 47 percent.

(3) Field testing of the "Introduction to Radiological Monitoring" self-study course was completed. Revised materials were being prepared and enrollments for the course were to be accepted during fiscal year 1973.

(4) "Shelter Management Fundamentals" correspondence course was still in the field test stage.

(5) "Local Government Budget and Program Administration" home study course was tested extensively in resident courses and was to be used in career development programs.

Community Shelter Planning (CSP) Training

The CSP Training Program was established in June 1965, and managed by the University of Tennessee Graduate School of Planning under contract with DCPA. The purpose of this program was to train State and local officials toward establishing coordinated plans for community shelter use. During fiscal year 1972, most of the CSP training work was performed at the DCPA Staff College. Special emphasis was placed on presenting materials concerning shelter allocation, movement to shelter, and organization of the shelter system. In addition, a Community Shelter Planning course was developed to better prepare communities to cope with all types of disaster. After most urban planning requirements had been satisfied, the CSP Training Program was discontinued June 30, 1972.

Civil Defense University Extension Program (CDUEP)

The extension divisions of land-grant colleges and universities, because of their experience in local communities and by reason of their facilities, have a unique capability for civil preparedness training and education. Under contracts wth DCPA, the extension divisions of the colleges and universities conduct conferences for government officials, train instructors, and give professional training courses in local communities.

During fiscal year 1972, the CDUEP brought civil preparedness training to 35,154 State and local personnel. A total of 410,178 persons have participated in the program since its inception. The program in fiscal year 1972 included contracts with 53 universities and colleges located in the 50 States, the District of Columbia, and Puerto Rico.

Through 281 conferences, a total of 12,008 State and local officials, key community leaders, and personnel in business and industry were briefed on civil preparedness. A total of 1,384 instructors were trained in 98 classes: 37 in shelter management, and 61 in radiological monitoring. Training was provided to 789 key staff personnel in 55 classes in Civil Defense Management, and 398 radiological defense officers received this training in 37 classes. Training was conducted for 459 shelter managers in 24 classes, for 1,076 radiological monitors in 75 classes. Also, 13,322 public officials were trained in 357 Emergency Operations Simulations, while 222 courses in Planning and Operations were attended by 4,151. In the area of refresher training, 276 radiological monitor instructors attended 21 Radiological Monitor Instructor Refresher courses, 111 radiological defense officers attended 10 Radiological Defense Officers Refresher courses, and 113 radiological monitors attended 9 Radiological Monitor Refresher courses.

National Education Organizations

During fiscal year 1972, DCPA continued work with the leadership of national education organizations to include civil preparedness as an integral part of the national school program. Specific effort included DCPA participation in the School and College Conference of the National Safety Council, the Annual Conference of the American Association of School Administrators (AASA), National School Boards Association (NSBA), National Congress of Parents and Teachers (PTA), and the National Education Association (NEA).

Discussions were held with key officials of the AASA, NSBA, and PTA with the objective of developing a single civil preparedness publication endorsed by all three organizations for use by school officials.

Civil Defense Education (CDE) Program

The primary purpose of the CDE Program is to use established State and local educational resources to incorporate disaster preparedness and survival information in public and private curricula, and to

assist school districts in preparing disaster plans as an integral part of the community plan. The CDE Program includes courses in personal and family survival, radiological monitoring, and shelter management.

At the beginning of fiscal year 1972, a major change occurred in management of the CDE program. Responsibility for administering State CDE contracts was assigned to DCPA Regional Directors. This responsibility, formerly delegated to the U.S. Office of Education, was reassigned to decentralize management and to improve program flexibility and responsiveness while concentrating on the individual needs of each State. Management decentralization resulted in an increase in program activity in many States. The exceptions were in States where a change in contractors resulted in a loss of momentum during the period required to train a CDE Coordinator and staff.

By the close of fiscal year 1972, all States except Louisiana, Ohio, and Rhode Island were actively participating in the CDE Program. Accomplishments during the fiscal year included:

- A total of 537,870 school children completed a Personal and Family Survival course of at least eight instruction hours. An additional 275,961 pupils completed at least one unit in Government in Emergency, and another 1,221,811 received a minimum of one hour special instruction in civil defense and disaster preparedness.

- School-oriented workshops were held, with a total attendance of 10,269 teachers and school administrators.

- Training assistance provided local civil preparedness agencies resulted in training of 13,595 radiological monitors and 3,169 shelter managers.

Medical Self-Help Training

The Medical Self-Help training program administered for DCPA by the U.S. Public Health Service (HEW) provides instruction in emergency medical care and treatment for sick and injured persons when professional medical services are not available.

The first major revision of Medical Self-Help training materials since fiscal year 1962 was initiated during this fiscal year when an agreement was negotiated to produce instructor materials on cardiopulmonary resuscitation and a revised film on artificial respiration.

The success of Medical Self-Help training program has been due to the support, time, and efforts of State and local health departments, civil defense organizations, the American Red Cross, the U.S. Armed Services, public and private schools and universities, hundreds of social, civic and service organizations, and thousands of volunteer instructors. The continued success of this program is evidenced by the sustained high number of Medical Self-Help training enrollments. A total of 2,007,634 students were trained in 59,554 courses during the fiscal year, bringing the cumulative total to 16,695,659 persons trained since the program began in fiscal year 1962.

Three Medical Self-Help Humanitarian Awards were presented during the fiscal year; one in Oklahoma, one in Michigan, and another in Florida. Since this award was established in fiscal year 1968, there have been 27 awards in 19 States. These awards are presented to persons who have saved lives through knowledge gained from Medical Self-Help training.

Rural Civil Defense Program

The Rural Civil Defense Program was continued during the year by the Extension Service of the U.S. Department of Agriculture (USDA), under a work order agreement with DCPA. This program provided civil preparedness information and education to the Nation's rural population of 54 million, including those who reside in communities of less than 10,000 population. This information and education effort stressed protection of people, livestock, and crops from the effects of all types of disasters.

During fiscal year 1972, filming of the 4-H TV series, "Living in A Nuclear Age," with accompanying guides and promotional materials, was completed. Various other kits, leaflets, pamphlets, slides, and handbooks completed during the year included:

1. Three family action workshop kits titled *Nuclear Emergencies, Tornadoes,* and *Food Emergencies;*

2. A leaflet titled *Winter Storm,* containing emergency instructions, for people residing in areas subject to severe winter storms;

3. A pamphlet titled *Hurricanes,* for use by residents of hurricane-prone areas;

4. A slide set with taped narrative titled *Protect Livestock from Fallout Radiation,* for use by extension agents, livestock specialists, and others concerned with the problem of protecting livestock from the effects of fallout radiation; and

5. A handbook titled *Disaster Handbook for Extension Agents.*

Training Materials

During fiscal year 1972, DCPA continued development and production of training materials to support Staff College training programs, the Civil Defense University Extension Program, and the Civil Defense Education Program. In addition, State and

local civil preparedness offices and Federal agencies were provided with civil preparedness training materials.

New materials included the production of games for school pupils and staffs entitled: *Games That Teach,* and *Environmental Realities;* and development of the draft of a new publication entitled *A Chance to Live,* intended for classroom use.

Existing training materials were reviewed in terms of the allocation of more instructional time to reflect the emphasis on the on-site assistance concept and on civil preparedness for peacetime disasters.

Training Evaluation and Improvement

Ongoing DCPA training programs are evaluated and improved as necessary; and new programs are field-tested before deployment for nationwide use. Fiscal year 1972 accomplishments in support of the program include:

1. Initiation of studies by the University of Kansas under DCPA contract to determine State and local use of the DCPA Planning and Operations course, and the use made of Emergency Operations Simulation materials by contracting universities.

2. Initiation of a DCPA study of rescue training capabilities for the purpose of increasing instructional effort in this area.

3. Agreement between the Boy Scouts of America and DCPA for establishment of Explorer posts throughout the country dedicated to the advancement of civil preparedness.

4. Contracting with the American Water Works Association (AWWA) to develop a course for water works managers. The course was tested at the AWWA national convention in San Mateo, Calif., and again, in Chicago, Ill.

INFORMATION—PREREQUISITE TO ACTION AND PROGRESS

The Federal Civil Defense Act of 1950 directs DCPA to "publicly disseminate civil defense information by all appropriate means." Under this Congressional mandate, the public information mission has two goals: (1) To disseminate information about the purpose and status of the U.S. civil preparedness program; and (2) to develop and distribute instructions and information which will enable government, private institutions, and the individual citizen to cope with the effects of nuclear attack.

Information activities in fiscal year 1972 stressed the changing thrust of the national effort in response to the need for increased Federal assistance to communities in planning and preparations to cope with peacetime disasters. This kind of assistance bridges the gap between nuclear attack-oriented aid and Federal help made available after a disaster, for cleanup and recovery operations.

In December 1971, the DCPA mission, by agreement with the President's Office of Emergency Preparedness, was broadened to include this peacetime disaster assistance. Information activities were consequently broadened to support the "redirected" activities. Major emphasis was placed on support of programs to help communities achieve improved "operational readiness," and on a new On-Site Assistance Program. This latter was stressed as the major vehicle for delivering DCPA planning assistance to the Nation's communities.

Since the civil preparedness effort involves three levels of government and the private sector, major emphasis was placed also on internal communications—among all the elements in the nationwide effort.

In fiscal year 1972, DCPA used internal documents, news releases, photos, fact sheets, speeches and statements by agency officials, briefing materials, motion pictures, and radio and TV scripts to reach the media and the public with information about civil preparedness.

To disseminate information internally, throughout the multilevel national civil defense structure, a continuing flow of information was maintained from national headquarters to DCPA's eight Regional Office newsletters, and to other specialized publications in the civil preparedness field.

This flow of information attracted broad media interest in the changing direction of civil preparedness.

Highlights

Among the major news media which carried articles or programs on "redirection" were: *The New York Times, The Washington Post,* the *Baltimore News-American,* and CBS television. All of these sought interviews with the Director of DCPA for their stories.

Miriam Ottenberg, the *Washington Star's* Pulitzer prize-winning reporter, wrote a definitive article on the Federal Disaster Assistance Program, highlighting the vital role of the Agency.

The announcement of the start of construction on the new, low-frequency radio warning system, known as the "Decision Information Distribution System (DIDS)," was a major national news story.

In December 1971, OCD published, "The Mayor's Command Center, Washington, D.C.," a 16-page, illustrated booklet, in color. The booklet describes the model command center and civil defense organization available to the Mayor of the Nation's Capital for command and control in emergencies. It was produced in cooperation with the District of Columbia Office of Civil Defense. It has been widely used in briefing visiting government

executives and civil defense directors on the need for central command and control in disaster.

During fiscal year 1972, production was completed and distribution made on the following motion pictures and radio/TV materials:

- Shortened version of "A Lady Called Camile"—for use in DCPA exhibits and for special use as a briefing film.
- Spanish language version of "A Lady Called Camille"— for use in Puerto Rico and many locations throughout the United States where there is a concentration of Spanish-speaking people.
- "Transportation's Role in Disaster"—shows cooperation of local chapters of the National Defense Transportation Association (NDTA) and civil defense during periods of local disasters.
- "Our Active Earth"—story on earthquake, fire, and floods; supplemented by six TV and four radio spot announcements. Produced with both English and Spanish soundtracks in cooperation with California's Office of Emergency Services.
- "Trouble at Tonti Station"—civil preparedness in action in Illinois; produced with cooperation of Illinois State Civil Defense Agency.
- "Civil Defense and You"—four-part TV series produced with cooperation of Cambria County, Pa., Civil Defense Office for broadcast over WJAC–TV, Johnstown, Pa.
- "Civil Preparedness and Region Five"—a segment of a five-part TV series on defense produced in cooperation with WFAA–TV, Dallas, Tex., and DCPA Region Five.
- TV film kit—mailed 850 TV film kits, each containing four one-minute public service announcements on civil defense activities. Distributed by State and local civil defense offices to local commercial and educational TV stations.

Other DCPA films in various stages of production during fiscal year 1972 include subjects such as Emergency Operating Centers, the Lubbock, Tex., tornado, Environment for Education—school building designs, civil preparedness at Cape Canaveral, Fla., and a Los Angeles/San Fernando Valley earthquake documentary.

The U.S. Government Subcommittee on Selection of Motion Pictures for Distribution Abroad selected three DCPA films as entries in the fiscal year 1973 foreign film festivals. They were: "Our Active Earth," "Trouble at Tonti Station," and "A Lady Called Camille" (shortened version).

"Our Active Earth" placed second in the annual National Educational Film Festival, Los Angeles. "A Lady Called Camille" placed second in the annual Federal Editors Blue Pencil competition in Washington, D.C.

During fiscal year 1972, there were requests for a total of 2,382 copies of DCPA films, which was in addition to the number initially released. A major reason for this was that more public schools were offering courses of study on civil preparedness.

LIAISON SERVICES WITH INDUSTRY, LABOR, AND ORGANIZATIONS

During fiscal year 1972, DCPA continued providing guidance and information to industry, labor, and national organizations to encourage emergency preparedness actions for protection of life and property against all types of disasters.

Industrial Participation

The industrial preparedness program offers guidance and advice to industry on methods of emergency planning and operations, concentrating upon (1) protection of personnel, facilities, and equipment; (2) continuity of management; (3) protection of vital records; and (4) development of mutual-assistance paets.

The resources and organizational capabilites of industry and business are invaluable factors in overall local civil preparedness. Industrial protective services, in particular, are generally well organized and equipped, and are ready for action at all times.

DCPA works with other Federal agencies, industry, and business in developing civil preparedness information materials to meet particular needs. DCPA also sponsors industrial civil preparedness conferences, seminars, and training sessions conducted primarily for civil preparedness purposes.

Information and Guidance Materials.—More than 200,000 copies of civil preparedness publications applicable to business and industry were distributed by DCPA during the fiscal year. As an example, 35,000 copies of the Provost Marshal General's Office booklet titled "Industrial Defense Against Civil Disturbances, Bombings, and Sabotage" were distributed to provide guidance on this increasing threat.

During fiscal year 1971, a series of six articles on emergency readiness was prepared for publication in the magazine *Environmental Control and Safety Management*. During fiscal year 1972, three new emergency readiness articles titled "Organizing for Self-Help in Emergencies," "Industrial Mutual Aid Associations for Emergencies," and "Operating Committees for The Mutual Aid Associations," were prepared. The nine articles were combined into one publication during the fiscal year, and more than 5,000 copies were distributed nationwide.

Exhibits.—A large exhibit entitled, "Emergency Roulette," illustrating the unpredictable nature of disasters, and emphasizing emergency preparedness

to meet them was introduced in September 1971, at the American Society for Industrial Security Seminar held at Chicago, Ill.

The exhibit "Emergency Roulette" was displayed also during the year at various industrial conferences and national conventions. Duplicates were ordered, in addition to some portable and tabletop displays, all using the roulette theme.

Conventions, Conferences, Seminars, and Training Activities.—Many industrial firms participated in civil preparedness conferences, seminars, and meetings during the year. Business, professional, educational, and other leaders obtained information and guidance through three industrial Civil Defense Management Training courses conducted at the DCPA Staff College, and through 15 industrial seminars and conferences held throughout the Nation. The conferences and seminars were conducted by State and local governments, professional and civic organizations, and educational institutions. DCPA frequently participated directly in these activities.

Industrial civil preparedness programs also reached industrial and business executives through courses of instruction and seminars conducted by other agencies of the Federal Government. DCPA provided assistance, guidance, and reference materials for the following: (1) National Security Seminars conducted by the Industrial College of the Armed Forces, with more than 3,500 military officers and key industrial civil defense leaders in attendance; (2) training courses and seminars on Industrial Defense and Emergency Planning conducted by the Military Police School at Fort Gordon, Ga., with 300 industrial and government officials in attendance; and (3) business, industry, and government conferences attended by more than 2,500 industrial leaders throughout the country. Coordination of industrial preparedness planning and emergency action with that of local government was stressed at the seminars, training courses, and conferences.

National Organizations

Liaison with industrial, trade, commercial, technical, scientific, veterans, fraternal, and civic organizations, is important for both local and national preparedness planning and action.

During fiscal year 1972, liaison work resulted in many national organizations supporting the civil preparedness program. Additionally, civil preparedness program support was received from various departments of government with civil defense responsibilities authorized by Executive order.

OCD exhibits and tabletop displays were placed at national conventions, conferences, and regional meetings of national organizations during the fiscal year.

Labor Support

Labor and trade unions continued their support of civil preparedness during fiscal year 1972, particularly in the area of labor leadership training. Some major examples of this support follow:

- As a result of labor leadership training seminars, 25,000 copies of a leaflet, "Labor's Role in Civil Preparedness," were distributed to labor officials throughout the Nation.
- A labor orientation course titled, "Labor's Role in State and Local Civil Defense," was given many times throughout the year at national, State, and central labor conferences and conventions.
- More than 30,000 pieces of civil preparedness-oriented literature were distributed at the Union-Industry Show in San Diego, Calif., during June 1972.

RESEARCH AND DEVELOPMENT

The DCPA research program has as its continuing goal the development of information and data of many kinds needed by policy and decision-makers for planning and executing the civil preparedness program; and for improving the effectiveness of operational systems and procedures—and occasionally, hardware. Inherent in the total program are considerations of systems which, as technology changes and international situations fluctuate, offer the best chances for decreasing loss of life and property and increasing the capability to recover from enemy attack.

The program is executed through contracts with governmental, educational, and private organizations. The four research categories are shelter, support systems, postattack, and systems evaluation. (See app. Q.)

Shelter Research

Studies conducted during fiscal year 1972 revealed that initial nuclear radiation could constitute a significant threat to the population under some circumstances. Encouraging progress was made in evaluating radiation intensities produced under various burst conditions, and work was initiated on shielding analysis for determining the protection offered by fallout shelters against initial nuclear radiation.

Studies to determine the behavior of blast forces within shelter space consisted of experiments designed to simulate the flows and loading inside a 100-person basement shelter. These tests indicated the best locations for shelter occupants and for storing survival stocks.

Major advances were made in the shock tunnel program to determine loading, structural response,

and debris characteristics of wall panels. Tests on arching walls—a common form of wall construetion in which masonry walls are built directly on top of one floor slab up against the bottom of the next slab overhead—indicate that this method of construetion could lead to a substantial increase in blast resistance at no increase in building cost.

A program to determine the ultimate load-carrying capability of conventional floor systems, has shown that floor slabs in which the steel is continuous are able to respond as sagging membranes, and offer increased blast resistance and protection. Because of the continuing need for predieting the eollapse of floor systems, the development of computer codes for dynamic analysis has been initiated. Currently available methods are primarily design-oriented, and are not directly applicable for predicting the collapse of structures.

Methods used in identifying building practices that result in stronger buildings against blast waves could also be used in evaluating the safety of buildings subjected to wind and flood.

Although the original food ration used in the DCPA stocking program had a longer shelf-life than anticipated, the idea proposed that some form of bulgur might last indefinitely led to initiation of a modest study to determine the feasibility of a satisfactory bulgur ration.

A prototype individual shelter plan for a very large NFSS shelter was developed. It was found that a large shelter system is complex, and that the planner must evaluate all aspects of the system before occupancy if the shelter is to function satisfactorily in an emergency. Shelter management training is especially critical since the number of shelter occupants in a single shelter would be comparable in numbers to the population of many small eities.

Methods developed for estimating chances for survival in buildings against all the effects of nuclear weapons were applied to 35 selected shelter buildings. These analyses indicate the safest types of buildings and the safest location within the buildings.

Since emergency movement of populations may offer significant lifesaving potential against hazards posed by both nuclear and natural disaster, work was undertaken to determine the potential types and quantities of shelter spaces that would be needed in suburban and rural areas throughout the country. Also, a study was initiated to update information on material types and quantities which might be used to construct expedient shelter to satisfy shelter deficits where they occur.

Case studies to evaluate the effeetiveness of various combinations of shelter and active defense eontinue to show that shelter is a vital component of defense.

Support Systems Researeh

An extensive examination was begun of alternatives for using current radiological defense equipment to provide standby capability that would be ready for use in event of attack and which at the same time would minimize the recurring costs to keep the equipment operable.

A Civil Defense Communication Guide was developed to help local planners make use of available government and nongovernment communications resourees to meet essential local requirements under disaster eonditions. An analysis of the "coordinated eommunications" concept in local and county systems revealed that it is possible to increase the utilization of existing computer facilities, improve emergeney services response and performance, and reduee eosts.

A study of electromagnetic pulse (EMP) effects on power systems revealed protective measures that can be taken at power substations to reduce induced surge voltages. Also, EMP protective hardware available for State and local procurement was being evaluated.

Continuing studies on protracted low dose-rate ionizing radiation exposures to large animals provided new insight on the relationship between exposure dose to dose-rate and radiation recovery in man. Other work on austere treatment of burns continued during the fiscal year.

Blast-fire interactions studies in a shock tunnel confirmed that flames are extinguished at the two overpressures tried—5 psi and 9 psi—but that cotton-filled mattresses reignite in one-half to one hour, and kapok and polyurethane foam eushions do not reignite. Burning curtains blown into an offiee or living room at one psi overpressure caused ignitions about half the time. This occurred when the conditions for burning were optimum. With other conditions, the number of ignitions would have been even less. The fuel values for a number of window arrays of curtains, drapery, shades, and venetian blinds, were found to be about 50 percent lower than predieted values; and their flaming times were found to be from two to six times longer than predicted. Full-scale experimental burning of similar barracks sections showed that the radiant energy as well as the burning rate compares well with simple empirical equations. A eheap nontoxic and practically waterproof flame retardant for wood surfaces was being tested. A computer firespread model was being adapted to include effects of firebrands, vegetation eoverage, blast-fire inputs, and countermeasures.

Development of emergency operations checklists was extended to include natural, in addition to nuelear, disaster operations, for both the inplace and the predisaster evacuation cases. Checklists also were

developed for nuclear disaster operations at levels both above and below the municipal level, which was the focus of previous work. Field testing of emergency operations checklists by means of simulation exercises was found to be effective, and scenarios for use in these exercises were prepared. The studies of natural disasters covered the planning for emergency operations and included an examination of the role of EOC's in such operations.

Postattack Research

Studies of expected beta doses from fallout particles included calculations for a range of particle sizes, skin-exposure periods, and times of delay between detonation and deposition on the skin. Depending on the amount retained and the time of retention, multiple fallout particles were found to be capable of causing skin damage at time of fallout arrival and up to several days.

Mathematical expressions were made from radiation effects experiments to predict radiation-induced lethality in insects and mammals. The size of the interphase chromosome volume of intestinal cells is currently believed to be the most accurate predictor of radiosensitivity for these species. Excellent correlations of whole-body mineral content of insects with radiosensitivity offers promise of a new and more accurate method of prediction.

Radiation effects research on crops provided a better understanding of the technical factors needed to assess the survival and recovery of agriculture in the event of nuclear attack, and a basis upon which to develop pre- and postattack radiological countermeasures. The yield of irradiated plants was found to be the most sensitive indicator of radiation injury. Important variables found to affect the yield of crops following fallout radiation exposure include: plant age or stage of growth when irradiated, and time of fallout arrival as well as dose rate.

The possibility of a shortage of electric power in many areas has been identified as one of the critical postattack problems. To help meet emergency needs, a method for use of induction motors as electric generators was developed. This method uses available resources to provide necessary elements for power generation.

Improvements were made in methods for predicting the amount and type of debris created by the detonation of nuclear weapons in urban areas, and in developing procedures for debris clearance under various damage situations. New information was used to develop guidelines needed to identify the constraints posed by the presence of urban debris on other postattack emergency activities.

The total postattack health care computerized model that works from attack simulations and projects the effects of various levels of health care resources on the recovery of injured or ill survivors has been further advanced. It now includes the impact on the surviving labor force and the time-phased ability of that force. Improvements were made in the techniques and formula used in assessing recovery time and disabilities associated with nuclear attack, and in establishing the requirements for antibiotics in the postattack period.

Improved data on probable postattack human behavior factors indicate that positive adaptive behavior among the survivors would outweigh negative maladaptive antisocial behavior, but that the need for leadership, information, reassurance, and instruction would be critical. This information about probable postattack human behavior was developed for use in joint Defense studies, and for use by other Government agencies in emergency preparedness planning.

A number of analyses have indicated that adequate resources and industrial capacity would survive a nuclear attack to permit survival and recovery of the Nation. The question still exists, however, whether certain types of attack might make survival and recovery unlikely or greatly increase the difficulties. A recent evaluation of the concepts and criteria of postattack viability developed support for the theses that selective targeting of critical industries could make recovery much more difficult.

Systems Evaluation

The computer model for Evaluating the Vulnerability of National Systems (EVUNS), was converted from a research project into a program available for operational use during fiscal year 1972. In addition to the basic geographical model which accounts for the distribution of people and resources, there are now five other integrated or correlated component models. They include an active/passive defense model; attack generator model; evacuation model; damage assessment model; and an economic recovery model. Also, a resource flow model was developed, but is not operationally ready.

Research on methods for the evaluation of city-county-multicounty {civil, preparedness} systems was accelerated. The present model, Test and Evaluation of Local Operating Systems (TELOS), has five major components. At present, the model has (1) an attack-environment generator, (2) a data processor, (3) a fire-hazard processor, (4) a casualty processor, and (5) a counter-measures model.

Studies of the vulnerability of the Nation's resource systems revealed that the interactions between energy, transportation, and production systems must be carefully accounted for if reasonable predictions are to be made of the impact of nuclear attack or other widespread disaster. Studies at the multicounty level were completed, using concepts derived from the EVUNS model. These studies provide a better basis for emergency planning involving industrial

activities. In related research, natural disasters were studied for the effects on urban structures and systems, and reports were issued on hurricanes and earthquakes.

The performance, operational experienees, and training needs of local civil preparedness direetors were studied to provide a sounder base for planning programs for their professional development. A national survey of public attitudes toward civil preparedness indicated that governmental expenditures are believed to be far higher than they actually are. Two-thirds of the public favors an emergeney warning device attached to radio and tclevision sets and would be willing to buy such a device if it were inexpensive. There also appeared to be no change in the favorable attitude that the general public has had for civil defense programs.

INTERNATIONAL ACTIVITIES

Mutual civil defense planning and the exchange of such information with friendly nations continued as the principal international activity of DCPA during fiscal year 1972. In coordination with the Office of the Secretary of Defense, the Office of the Secretary of the Army, and the Department of State, DCPA maintained cooperative relationships with the civil defense organizations of other friendly countries, the North Atlantic Treaty Organization (NATO), and the US/Canada Civil Emergency Planning Committee (CEPC).

On May 2, 1972 at the request of the Department of State, DCPA offered its assistance in the planning and preparation of a natural disaster preparedness seminar to be conducted jointly by the Organization of American States (OAS) and the Commonwealth of Puerto Rico. This hurricane-oriented preparedness seminar scheduled for December 3–8, 1972, in San Juan, Puerto Rico, is considered an important initial step to help strengthen the capabilites of hurricane-threatened Caribbean countries to cope with disasters.

The DCPA Director and his Executive Assistant represented the United States at the September 1971 meeting of the NATO Civil Defense Committee held in Brussels. A DCPA representative attended a meeting of the International Electrotechnical Commission, Technical Committee, in Bucharest, Roumania, in September 1971. This Commission is concerned with international standardization of nuclear instruments. DCPA was also represented at a meeting of German fire protection groups at the "Red Rooster" (European symbol for fire matters) Exposition, which opened on June 24, 1972, in Frankfurt-am-Main.

At the request of the Department of State, the DCPA General Counsel attended the May meeting of the International Committee of the Red Cross (ICRC) Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, held in Geneva. Consideration was given to a draft protocol concerned with the protection of civil defense personnel engaged in humanitarian tasks in time of war.

In May 1972, at the request of the Agency for International Development (AID), a national natural disaster preparedness planning seminar was condueted by DCPA at Staff College in Battle Creek, Mieh. In addition, the group toured DCPA and OEP Regional Offices, met State and local civil defense officials, and were briefed at the Pentagon on overall national civil preparedness programs.

DCPA had 41 other visitors from 13 countries during the fiscal year. These included officials from Argentina, Australia, Canada, Finland, France, Germany, Israel, Jordan, New Zealand, Philippines, Saudi Arabia, Sweden, Switzerland, and the United Kingdom. Sixty military officers and civilians from the Iranian National Defense University, on a U.S. study tour in June 1972, were briefed on DCPA organization and operations.

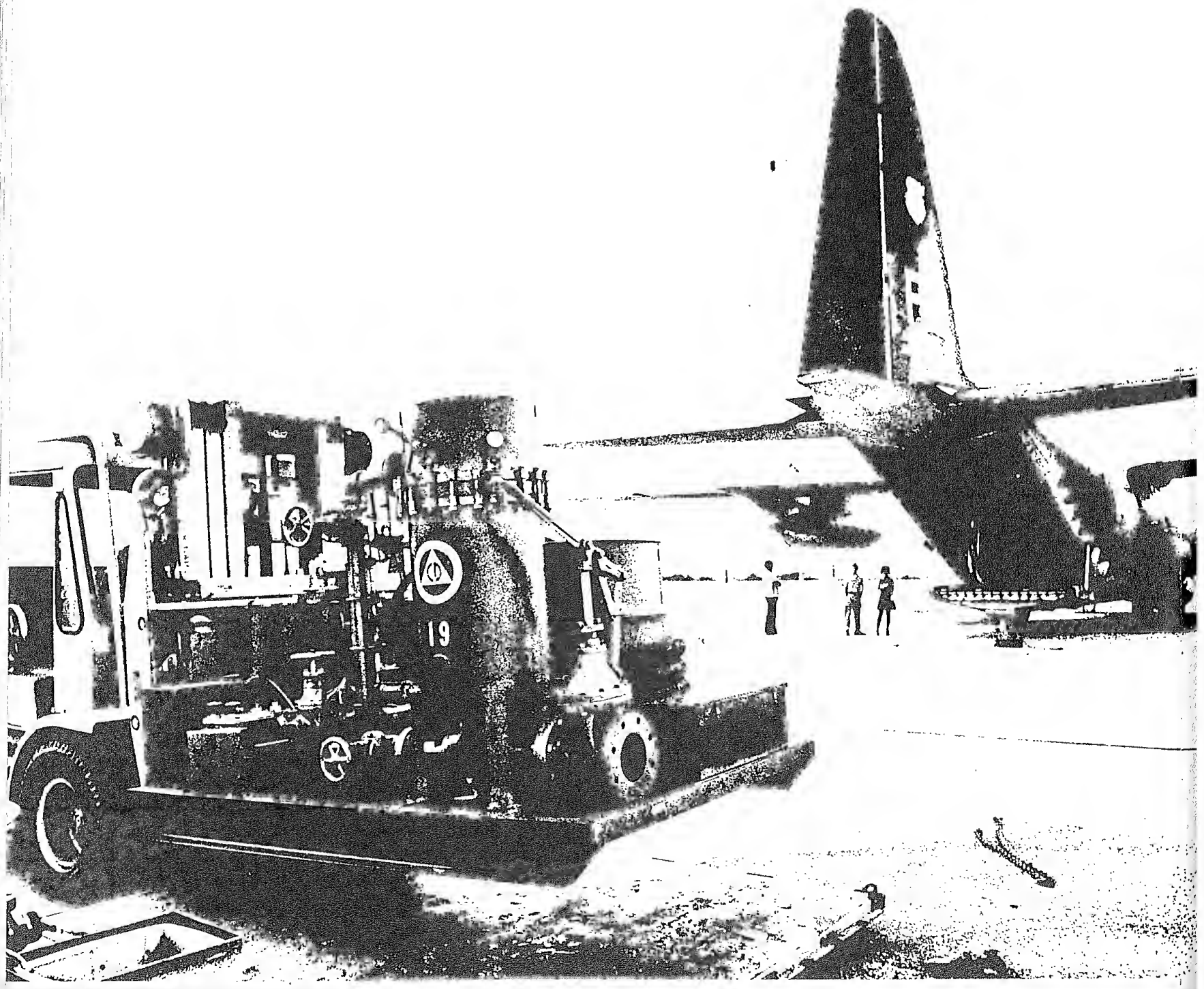
NATO and Central Treaty Organization (CENTO) member countries were supplied with DCPA Information Bulletins and technical publications on a continuing basis, as well as the DCPA Annual Report for fiscal year 1971. In response to 168 requests, information and publications were sent to 37 countries. A new DCPA motion picture was furnished the NATO civil defense library for loan to member countries. This and other films were loaned to or purchased for official use by Canada, India, Switzerland, and Turkey. DCPA purchased the British eivil defense film, "Sound an Alarm."

A meeting of the US/Canada Civil Emergency Planning Committee (CEPC) was held in Ottawa in June 1972. DCPA was represented by the Director and two staff members. The DCPA Director is eochairman of the Committee. This Committee is a vehicle to provide consultations and cooperation in civil emergency planning to achieve the maximum degree of compatability feasible between the emergeney plans and systems of the two countries. The third meeting of the Regional Civil Emergency Advisory Committee (RCEAC) was postponed so that the parent committee, CEPC, could evaluate its activities. The CEPC direeted the RCEAC to eontinue its mission of guiding and coordinating regional and State/Province activities in cross-border emergeney planning and operation. The RCEAC is seheduled to meet in Regina, Saskatchewan, in October 1972. DCPA and Canada Emergency Measures Organization (CEMO) staffs have completed details on radiological reporting and coordinated exereises.

Two DCPA representatives visited Canada to partieipate in a June meeting of the Radiation

Shielding Subcommittee of the Advisory Committee on Civil Defense of the National Academy of Sciences held in Ottawa. Another staff member traveled to Canada in May to confer with scientific and technical civil defense personnel and fire officials. DCPA was represented at a May meeting of Canadian Provincial Public Information Officers held at the Canadian Emergency Measures College at Arnprior, Ontario, where ideas of mutual interest were exchanged.

Federal Assistance



"People are the most important element of any program. Ideas and budgets are important too. But people—imaginative and industrious people—are necessary to apply ideas and money effectively."

CONGRESSMAN TOM STEED
Shawnee, Oklahoma

The DCPA financial assistance program helps State and local governments obtain needed equipment and supplies for emergency purposes, as well as to help pay personnel and administrative expenses; the cost of civil defense training; and planning, design, and construction costs in the development of Emergency Operating Centers. Federal surplus personal property may be donated to States and their political subdivisions for civil defense purposes, while certain Federal property is authorized for loan under the Contributions Project Loan Program.

The four basic requirements for a unit of government to be eligible for DCPA financial assistanee are:

1. Civil preparedness organization arrangements must be established pursuant to law.

2. There must be a State-approved operations plan.

3. There must be an approved program paper for the current Federal fiscal year.

4. The State or local civil defense agency must comply with Title VI of the Civil Rights Act of 1964.

In addition, applicants for financial assistance for personnel and administrative expenses must (1) have an approved merit system for all of their civil preparedness employees, and (2) submit annually, a financial plan and staffing pattern.

The program paper is the key instrument for determining whether a State or political subdivision will be granted Federal matching funds. It describes what is planned to be accomplished during the next fiscal year, and the number of employees and funds needed to carry out these activities.

SUPPORTING SYSTEMS EQUIPMENT; AND EMERGENCY OPERATING CENTERS

The primary source of supplies and equipment needed in civil emergencies would be those used in the day-to-day peacetime operations of Federal, State, and local governments. For example, existing communications systems would be used to fulfill most emergency communications requirements, and would be augmented only as necessary to assure coordinated emergency operations. Special items of equipment may be required to meet unique civil preparedness requirements. Centralized control of operations is essential to assure the most effective use of services, facilities and supplies. Emergency Operating Centers are protected facilities, with communications, emergency power and adequate space and equipment for effective direction and control.

To receive Federal financial asisstance, local civil preparedness directors or other appropriate officials must submit project applications, with justifications, to the State civil defense agency. Upon approval, an application is forwarded to the DCPA Regional Office. If approved at that level, the applicant is notified, and the purchase may be made. The applicant may be reimbursed for up to one-half of the cost upon submission of a bill to the DCPA Regional Office. Use of facilities and materials obtained with Federal assistance is intended for all types of disaster situations.

Approximately $2.1 million were obligated during fiscal year 1972 for State and local supporting systems equipment. (See app. R.)

During the fiscal year, more than $4.7 million in Federal funds were obligated for the planning, design, construction, and/or equipping of State and local EOC's. (See app. R.)

SYSTEMS MAINTENANCE AND SERVICES

This program provides the funding for recurring and maintenance costs of State and local communications and warning systems to insure continued operational capability. Since 1952, DCPA has assisted States and their political subdivisions in building extensive communications and warning systems which

are essential to civil preparedness operations in all kinds of disasters. Such equipment must be maintained and protected by the States and their political subdivisions to assure ready availability for civil preparedness purposes.

Communications and warning systems are of major benefit to localities having a high incidence of natural disaster. The operability of such systems is guaranteed by Federal grants which insure adequate maintenance and other standby costs. Detailed communications planning studies are also an integral part of the development of an operational capability. Grants are made to local governments for training courses and test exercises to maintain the highest degree of readiness in the event of disaster.

Approximately $1.4 million were obligated during fiscal year 1972, for communications and warning recurring and maintenance costs, and tests and exercises. Of this amount, approximately 97 percent was used for communications and warning recurring and maintenance charges. (See app. R.)

PERSONNEL AND ADMINISTRATIVE EXPENSES

The Federal Government shares in the costs of employing professionals and their clerical support to plan, coordinate, and operate special activities not ordinarily a part of government; for example, warning systems, fallout shelter systems, radiological monitoring systems, and emergency direction and control. Civil preparedness personnel perform coordinating and specialist roles, involving the training and other preparation of regular elements of government for emergency functions. State and local civil preparedness employees numbering 3,860 full-time and 1,938 part-time at the end of fiscal year 1972, were responsible for emergency planning and organization, and for the training of some 2.8 million other State and local government employees and auxiliaries who carry out emergency services, as needed.

DCPA allocates appropriated personnel and administrative funds directly to the States. The States, in turn, allocate these funds to their political subdivisions.

All States, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, and 2,193 political subdivisions participated in the Personnel and Administrative Expenses program during fiscal year 1972. DCPA made $22.9 million available for this program. The number of State and local employees performing civil preparedness functions totaled 5,798 at the end of fiscal year 1972. (See app. R.)

STUDENT EXPENSE

Partial reimbursement of travel and per diem expenses of students attending DCPA schools was continued to encourage training of State and local civil preparedness personnel. Course-completion certificates issued to students reimbursed under this program during the fiscal year numbered 249; and the amount reimbursed was $34,134. Cumulative expenditures since this program was started in fiscal year 1960 total $814,281; and a cumulative total of 12,469 completion certificates have been issued.

SURPLUS PROPERTY

The Federal Property and Administrative Services Act of 1949, as amended, authorizes the donation of Federal surplus property for use in any State for civil defense purposes. When no agency or department of the Federal Government needs equipment that another Federal agency wishes to dispose of, the equipment is declared "surplus" and can be donated for use in any State for civil defense, health, and educational purposes.

Eligibility requirements are the same as those for obtaining funds under the Supporting Systems Equipment and Emergency Operating Centers programs.

DCPA has developed a list of surplus items deemed useful and necessary for civil defense purposes. This list includes generators, winches, hoists, chain, rope, and firefighting, rescue, and safety equipment, and many other items. Items authorized, with State approval, are earthmoving and excavating equipment, highway maintenance equipment, woodworking machinery and equipment, prefabricated structures and scaffolding, storage tanks, vessels and small craft, and metal-working machinery.

When a locality has met eligibility requirements during any given fiscal year, it may acquire needed equipment for use in developing its civil defense capability. Occasionally, when a locality needs equipment not on the list of useful and necessary items, it may apply to DCPA for special consideration. A locality obtaining surplus property must pay a small handling fee to the State.

Regulations permit collateral or subordinate use of surplus equipment, if authorized by the State or local civil defense director; and the governmental unit to which the property is assigned has a civil defense responsibility. All property must be maintained in condition for emergency use.

During fiscal year 1972, surplus equipment obtained for civil defense purposes was used extensively to combat the effects of natural disasters and other peacetime emergencies.

Since the program was first launched in fiscal year 1957, property having an acquisition cost of approximately $564 million has been transferred to State and local governments. Federal surplus property with an original acquisition value of nearly $54 mil-

lion was donated to State and local governments during fiscal year 1972. (See app. R.)

CONTRIBUTIONS PROJECT LOAN PROGRAM

DCPA participates in the DoD utilization program to screen and claim DoD exeess property for its Contributions Project Loan Program. DCPA is able to claim this property at the end of the Military Priority Date, just before it would normally be transferred to the General Services Administration.

This authorization permits DCPA to acquire a variety of high-quality items at no eost for use in the Contributions Project Loan Program. The property is loaned to States and their politieal subdivisions, subject to established regulations governing the contributions equipment program. As in other facets of the contributions program, States or political subdivisions are required to have a civil defense plan. The eivil defense organization may transfer the property (by custody receipt) only to political components or organizations having civil defense responsibilities. For example, the program permits long-term loan of generators to States and localities for use in Emergency Operating Centers and Emergeney Broadeast Stations. Formerly, DCPA had purchased generators for these programs. The benefits provide a eonsiderable savings in dollars and an increased eivil defense capability.

Loan procedures are initiated with submission of a Project Application by the State or political subdivision. The form must indicate that the application is in lieu of Federal funds.

Contributions Project Loan property having an original acquisition cost of nearly $16 million was loaned to State and local governments by the elose of fiseal year 1972. (See app. R.)

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APPENDIX A.

DCPA/OEP Letters and Agreement

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF EMERGENCY PREPAREDNESS,
Washington, D.C., December 9, 1971.

HON. ROBERT F. FROEHLKE,
Secretary of the Army
Washington, D.C.

DEAR MR. SECRETARY: As part of the continuing program for improving emergency preparedness, my office has completed arrangements for staff augmentation by Office of Civil Defense personnel in emergency situations. Even though the OEP regional offices have now moved into the city, we will continue to rely on OCD augmentation support in a variety of emergency situations. I am grateful for the assistance in this matter.

My staff and the staff of OCD are working on the details of developing a natural disaster preparedness course for use at the OCD Staff College. I believe this is a worthwhile endeavor and hope we can get it launched in the early future.

An area of the President's Disaster Assistance program in which I believe the Office of Civil Defense can make a significant contribution is in working with communities on local preparedness for natural disasters. There is a considerable degree of commonality in the elements of preparedness necessary for effective response to various kinds of natural disasters—tornadoes, hurricanes, floods, earthquakes—and certainly preparedness for these disasters makes a contribution to preparedness for a nuclear attack situation. It is clearly in the national interest to make full use of available Federal capabilities to improve preparedness for disasters generally.

It is my impression that most communities are reasonably well prepared to offer such disaster assistance services as firefighting, rescue work, and police protection. Fewer communities are well prepared in such areas as emergency medical services, mass care (emergency feeding, shelter and clothing), community telecommunications, warning and evacuation arrangements and provision of emergency utilities. In order to obtain a more accurate assessment of what the local disaster preparedness problem really is, we need a systematic survey of selected communities in disaster prone areas to determine what their most pressing disaster needs will be. This will also provide a better basis for planning specific disaster asssistance from the States and the Federal Government. I believe that OCD, building on the pilot project undertaken in recent months, can move effectively in this program area, selecting for first attention those communities in locations of high natural disaster incidence.

Accordingly, in furtherance of my responsibilities from the President and the Congress for the disaster assistance program, I request that OCD undertake the task of fostering local government organizations and plans for coping with major disasters and of providing advice and guidance to local governments on organization and preparedness in order to meet the effects of major disasters. I would expect that this task would be carried out in consonance with overall policies established by the Office of Emergency Preparedness. As a part of this task, I would appreciate receiving periodic reports of your progress as well as readiness evaluations of selected communities. Arrangements for reporting should be the subject of further discussions between my staff and the staff of OCD. Based on these reports and evaluations and under Public Law 91-606 authorities, more definitive State disaster assistance plans can be formulated.

It is my understanding that OCD is prepared to undertake responsibilities for local disaster preparedness with resources normally available to you. I do underline that my request in this letter should not be regarded as a basis for obtaining more personnel or other resources, or for exemption from personnel or budget reductions that may otherwise be imposed. I have discussed this matter with the Office of Management and Budget.

If this role is accepted, I ask that the OCD staff continue to work with my Assistant Director for Disaster Programs, to establish mutually acceptable operating procedures and measures for bringing in other Federal support as required.

Sincerely,

G. A. LINCOLN, *Director.*

JANUARY 5, 1972.

HON. GEORGE A. LINCOLN,
Director, Office of Emergency Preparedness,
Executive Office of the President,
Washington, D.C.

DEAR ABE: Secretary Froehlke has asked me to reply to your letter of December 9, 1971, concerning assignment of certain major disaster preparation and training tasks to the Office of Civil Defense. I am always gratified when OCD can be of assistance to your office during an emergency period, by staff augmentation or other support.

The Office of Civil Defense will be most pleased to undertake the assignments indicated in your letter, especially with reference to fostering local government organizations and plans for coping with major disasters, and providing advice and guidance to local governments on organizations and preparedness to meet the effects of major disasters. I also believe OCD could, through our staff college, devise and administer training courses for these purposes.

I believe, with you, that the Office of Civil Defense can make a significant contribution in working with communities on local preparedness for natural disasters, and that this will reinforce the national defense efforts of the Office of Civil Defense with the States and local communities. It will also tend to emphasize the dual nature and daily utility of civil defense preparations undertaken by State and local governments, point up the many common elements in both efforts, and reinforce the relevancy of the national civil defense efforts with State and local governments.

I believe that OCD and OEP should seek a closer coordination in the area of State disaster plans. These plans have a great bearing on the mode of emergency operations at the city and county level of government, the reporting procedures and the local preparation for the assumption of outside or supplemental assistance in time of emergency. OCD cannot, under the Federal Civil Defense Act, eliminate the state in conducting our relationships with local governments.

While it need not delay the efforts of OCD outlined in your letter, I agree that it appears our respective staffs need to work out details of the assignment. OCD will, of course, observe OEP policies and priorities in the assignment. We can schedule readiness evaluations of selected communities to meet your priorities and copies of our internal reports will be provided routinely.

While OCD would expect to undertake the assignment within resources normally available, we would not expect it to detract from considerations in allocating personnel or other resources. We would continue to expect resource decisions for the Office of Civil Defense to be made essentially on national defense considerations. We do not, at this time, expect the disaster planning and preparedness efforts to adversely affect our national defense efforts, inasmuch as I am convinced that the two are compatible. I do not anticipate that this assignment will require additional funds. If our evaluations should prove inaccurate, I certainly would advise you and assure that the Office of Management and Budget would be notified promptly through appropriate channels.

My staff will be in touch with your Assistant Director for Disaster Programs, to establish mutually acceptable operating procedures and measures in accordance with your letter. I look forward to a closer relationship with your disaster preparedness activities and am confident the outcome of this arrangement will be a more meaningful contribution to both civil defense and major disaster preparedness at the State and local level.

Sincerely,

(Signed) JOHN E. DAVIS,
Director of Civil Defense.

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF EMERGENCY PREPAREDNESS,
Washington, D.C., February 18, 1972.

HON. JOHN E. DAVIS,
Director of Civil Defense,
Department of the Army,
Washington, D.C.

DEAR JOHN: On December 9, 1971, in a letter to the Secretary of the Army, I requested that the Office of Civil Defense undertake certain tasks related to local government preparedness for major disasters. In your reply of January 5, 1972, for the Secretary, you expressed your willingness to accept this assignment.

Accordingly, in furtherance of my responsibilities from the President and the Congress for the disaster assistance program, I do assign to you the following tasks:

1. Fostering local government organizations and plans for coping with major disasters; and

2. Providing advice and guidance to local governments on organization and preparedness to meet the effects of major disasters.

Policies and procedures under which these functions are to be performed are set forth in enclosure A to this letter.

Sincerely,

G. A. LINCOLN, *Director.*

Enclosure A.

POLICIES AND PROCEDURES FOR PERFORMANCE OF ASSIGNMENT TO THE OFFICE OF CIVIL DEFENSE RELATED TO LOCAL GOVERNMENT PREPARATIONS FOR MAJOR DISASTERS

I. Purpose

This paper sets forth policies and procedures for the guidance of the Office of Civil Defense in its performance of the tasks assigned by the Director, Office of Emergency Preparedness.

II. Scope

Preparedness for major disaster is a continuum which includes disaster avoidance, reduction of vulnerability, response to imminent or actual disaster events, and rehabilitation. The policies and procedures herein pertain only to the immediate threat or actual occurrence of major disaster.

The scope of the OCD assignment is preparedness by local government for actions taken—

(*a*) During the time between warning or alerting of approaching disaster and its actual impact.

(*b*) During or following disaster impact in response to immediate threats to life and property.

(*c*) To care for displaced persons and make immediate restoration of essential public services.

III. General measures

There are certain general measures common to all disasters. For purposes of this document, general measures are defined as actions and procedures for the following:

(*a*) Evacuation required for precautionary or remedial purposes.
(*b*) Food, shelter, and clothing required by displaced persons.
(*c*) Emergency health services required to treat injured persons and maintain the public health.
(*d*) Emergency utility services required to substitute for disrupted public utilities.

The most significant influence on preparedness for general measures is the amount of warning or advance notice that can be expected. Accordingly, separate consideration must be given to disasters that occur with and without warning.

Government management procedures may vary significantly in different disaster situations. Some emergencies can be met by local government in its normal peacetime administrative posture. In other situations decisionmaking and implementing actions must be greatly accelerated, and governments must assume an emergency organizational posture. The principal features of an emergency organizational posture are centralized control and use of resources basically intended for other purposes. An emergency operating center which provides protection may be necessary in certain disasters. It may also be necessary where normal communications are disrupted, or where integrated operation of several departments and agencies is required.

As a general rule the priorities for local government general measures preparedness actions, in the order of their priority, are:

(*a*) Preparations for warning and advising the public.
(*b*) Preparations for continuation of basic services of government including direction and control.
(c) Preparations for restoration of or substitution for nongovernmental services upon which people normally rely.
(*d*) Preparations for continuation of utility services.
(*e*) Preparations for expansion of the basic services of government.

IV. Basic planning concepts

Local government is the first line of defense against disaster. Local government preparations for disaster emergencies have a direct and important bearing on the efficiency with which State and Federal support can be brought to bear.

The emergency authorities of the Federal Government, and of most States, provide for emergency assistance not available during normal periods of administrative operations. Congress has recognized that States and local governments will need help in major disasters and has established definitive authorities for assistance by the Federal Government. It is not intended by Congress, or by the American people acting through voluntary relief agencies, that a community struck by major disaster must exhaust its own capabilities before outside help is warranted.

Accordingly, reliance on outside assistance is a feature of peacetime emergency planning. While this does not relieve a local government of its responsibility for maximum possible preparation, it recognizes that the supplemental support capabilities of the State and Federal Governments are a part of local planning for major disaster emergencies.

In a disaster local government must continue to provide the essential services it regularly provides. Disaster also may create unusual requirements for which there are no regularly established services or sources. Precautionary or remedial evacuation mass care and public warning, for example, are disaster created requirements which have no normal equivalent. Local government must see that such new or unusual needs are met.

There are substantial differences in the kinds of disaster producing events and in geographical susceptibility to particular disasters. There is also a substantial difference in the organization of local governments and in the abilities of their regular departments. Added to this are variations in utility services—some private, some government operated, and some managed by organizations that are essentially outside of the local government's geographical jurisdiction. The national program for local natural disaster preparedness must adjust to these and other variations rather than seek a common level of readiness for all local governments.

Preparedness planning for major disasters is of two distinct types: Contingency planning for specific disaster events and general measures planning for response to any disaster. In general, contingency plans, based on specific vulnerability analyses, can be prepared for areas threatened by hurricane, earthquake, storm surge, volcano, landslide, and floods. Other disaster threats, such as explosions, tornadoes, severe storms, fires, and transportation accidents are universal threats which vary widely in time, place, and intensity of occurrence. With the exception of locally identifiable fire and explosion hazards, local government readiness for these universal disaster threats will consist of general measures plans and preparations.

V Planning steps and responsibilities

1. Identify geographic areas susceptible to specific natural disaster threats and establish general priorities for field planning efforts based on seasonal nature of disaster threat, numbers of people at risk, and other factors. Responsibility: Assistant Director for Disaster Programs, OEP.

2. Identify specific localities where, because of the high concentration of population and susceptibility to either earthquake or hurricane, special vulnerability analyses, and coordinated Federal, State, local contingency planning will be undertaken on a project basis. Responsibility: Assistant Director for Disaster Programs, OEP.

3. Determine regional and State priority, if any, for preparedness against specific disaster threats. Consideration will be given to seasonal nature of weather phenomena, status of risk mapping, or other vulnerability studies, population at risk, and status of existing readiness. This step is intended to establish the basic criteria for selection of specific communities. Responsibility: Regional Director, OEP, in coordination with the Regional Director; OCD, and the State.

4. Select specific localities (excluding those designated in step 2 above) for specialized planning support in accordance with basic criteria established in step 3. Responsibility: the Office of Civil Defense, in coordination with the Regional Director, OEP, and the State.

5. Make a vulnerability analysis of the selected community. The vulnerability analysis should be sufficiently complete and accurate to permit development of specific contingency plans in localities susceptible to earthquake, hurricane, storm surge, volcano, landslide, floods, or locally identifiable fire or explosion hazards. Responsibility: OCD in coordination with the State and local.

6. Assess current local government preparedness. It is not intended that this assessment attempt to rate the community against a theoretical ideal. The main purpose of the assessment is to determine what emergency functions the community is not prepared to perform. Responsibility: OCD in coordination with the State and local.

7. Prepare recommendations for specific preparedness actions by local government in order of their priority. Identify those functions which will require outside assistance and recommend the source of such assistance. Responsibility: OCD in coordination with the State and local.

8. Develop a schedule for integrated local, State, and Federal preparedness actions. This action will require coordination and approval of all participants. Responsibility: OCD is primarily responsible but it is essential that the schedule is developed in coordination with the OEP Regional Director who will be responsible for insuring that activities involving more than one Federal agency reflect an integrated Federal team approach. (For example, as with the nuclear incident planning effort.)

9. Carry out scheduled actions and conduct appropriate tests and exercises. Responsibility: OCD, Federal agency team, or other Federal agency, as appropriate.

VI Associated planning

In addition to the preparedness actions by the local government there will be need for corollary preparedness actions by the State and by Federal agencies. It is the responsibility of the OEP Regional Director to assure that these preparedness actions are performed in timely fashion, by direct action of the OEP regional staff or by assignment to one or more Federal agencies.

VII Reports

OCD will keep OEP regional directors informed of the scheduled activities in selected localities. Additionally, OCD will provide information to OEP on the results of their field efforts upon completion of planning steps 5, 6, and 7 in each locality.

March 8, 1972.

Hon. GEORGE A. LINCOLN,
Director, Office of Emergency Preparedness,
Executive Office of the President,
Washington, D.C.

DEAR ABE: This replies to your letter of February 18, 1972, making certain assignments to the Department of Defense, Office of Civil Defense, for local government plans and preparations to meet major disasters.

The Office of Civil Defense, for the Department of Defense, will be most pleased to undertake these assignments, in accordance with the policies and procedures for priorities set forth in enclosure A to your letter, while recognizing that certain details of the policies and procedures may need revision or modification as the assignment progresses.

My staff will be in touch with your staff on a regular basis concerning the assignment and its progress. It would also seem that certain unresolved matters, such as coordination or consolidation of the administration of planning grants to States by OCD and OEP and coordination of State plans with local plans, need further exploration.

I look forward to a gainful, productive, and mutually rewarding effort in this endeavor.

Sincerely,

JOHN E. DAVIS,
Director of Civil Defense.

APPENDIX B.

Establishment of the Defense Civil Preparedness Agency

THE SECRETARY OF DEFENSE
Washington, D.C.

May 4, 1972

MEMORANDUM FOR

Secretaries of the Military Departments
Chairman of the Joint Chiefs of Staff
Director of Defense Research and Engineering
Assistant Secretaries of Defense
General Counsel
Assistants to the Secretary of Defense
Directors of Defense Agencies
Director-Designate, Defense Civil Preparedness Agency

SUBJECT:

Establishment of the Defense Civil Preparedness Ageney

References:

(a) DoD Directive 3025.1, "Employment of Military Resources in Natural Disaster Emergencies within the United States, its Territories and Possessions," August 30, 1971
(b) DoD Directive 3025.10, "Military Support of Civil Defense," March 29, 1965

Effective 5 May 1972 the Defense Civil Preparedness Ageney (DCPA) is established. Effective that same date, the Office of Civil Defense, Department of the Army will be disestablished and its current functions transferred to DCPA. DCPA will also be responsible for providing assistance to State and local governments in the development of natural disaster preparedness plans. This task will be performed under the policy guidance of the Director, Office of Emergency Preparedness.

On 5 May 1972 all funds, manpower spaces, personnel and other resources presently authorized the Office of Civil Defense will be transferred from the Department of the Army to DCPA. I desire that the Department of the Army provide administrative support to DCPA. A Memorandum of Understanding between DCPA and the Department of the Army will be developed for DCPA's administrative support. Establishment of DCPA does not derogate the authorities and responsibilities set forth in references (a) and (b).

DCPA will be headed by a civilian who will be appointed by and report directly to the Secretary of Defense.

Mr. John E. Davis, present Director of Civil Defense, is appointed the first Director, Defense Civil Preparedness Agency effective 5 May 1972.

I have instructed the Assistant Secretary of Defense (Comptroller), working with the Director-Designate, DCPA, to submit to me a proposed directive establishing DCPA and detailing its authorities, functions, and responsibilities. In addition, I desire that the Assistant Secretary of Defense (Comptroller), working with the Secretary of the Army, provide for the orderly transfer of funds, manpower spaces, personnel and other resources currently assigned to the Office of Civil Defense from the Office of the Secretary of the Army to DCPA.

I desire that DCPA become fully operational as of 5 May 1972. The full cooperation of all elements of the Department of Defense toward this end is expected.

HON. MELVIN R. LAIRD
Secretary of Defense

APPENDIX C.

DoD Directive 5105.43, July 14, 1972

July 14, 1972
Number 5105. 43

DEPARTMENT OF DEFENSE DIRECTIVE

SUBJECT: Defense Civil Preparedness Ageney (DCPA)

Refs.:

(a) Federal Civil Defense Act of 1950, as amended, 50 U.S.C. App. 2251 *et seq.*
(b) Executive Order 10952, "Assigning Civil Defense Responsibilities to the Secretary of Defense and Others," July 20, 1961
(c) Executive Order 11575, "Providing for the Administration of the Disaster Reiief Act of 1970," (P. L. 91-606), December 31, 1970
(d) Executive Order 11051, "Prescribing Responsibilities of the Office of Emergency Preparedness in the Exeeutive Office of the President," September 27, 1962
(e) Executive Order 11490, "Assigning Emergeney Preparedness Functions to Federal Departments and Ageneies," October 28, 1969, as amended
(f) through (n) are listed in Enclosure 2

I. GENERAL

Pursuant to authority vested in the Secretary of Defense under the provision of 10 U.S.C. the Defense Civil Preparedness Agency (DCPA) is hereby established as an Agency of the Department of Defense under the direction, authority, and eontrol of the Seeretary of Defense and subject to DoD policies, directives and instructions.

II. CANCELLATION

References (m) and (n) are hereby superseded and eancelled.

III. MISSION AND SCOPE

A. The DCPA mission is to:

1. Diseharge and perform the civil defense functions delegated to the Secretary of Defense pursuant to Seetion 1, Exeeutive Order 10952 (reference (b));

2. Discharge and perform the disaster warning funetion delegated to the Secretary of Defense pursuant to Section 1(c), Executive Order 11575 (reference (c));

3. Provide natural disaster preparedness pianning assistance to State and local governments in accordanee with agreements between the Director, DCPA, acting on behalf of the Secretary of Defense, and the Director, Offiee of Emergency Preparedness (OEP) and other Government departments and agencies and in consonanee with policy guidance provided by the Director, OEP pursuant to Executive Orders 11575 and 11051 (references (e) and (d)).

B. The efforts and operations of DCPA will be designed to provide an effective and viable National Civil Defense Program in aecordance with referenees (a) and (b). DCPA will, in addition, provide planning guidanee and assistance to State and local governments in natural disaster preparedness in eonsonance with III. A. 3. above.

C. DCPA operations will be conducted within the United States and U.S. Territories and Possessions and the Commonwealth of Puerto Rico.

D. As used in this Directive, DoD Components shall refer to the Office of the Secretary of Defense, Organization of the Joint Chiefs of Staff, the Military Departments, and the Defense Agencies.

E. This Directive does not derogate the authorities and responsibilities set forth in DoD Directives 3025.1, 3025.10, 5105.22, and 5100.30 (referenees (g), (h), (i), and (j)).

IV. ORGANIZATION

A. DCPA shall consist of:

1. A Direetor, a Deputy Director, a headquarters establishment, regional offices and such subordinate facilities and aetivities as are herein or hereafter specifically assigned to the Agency by the Secretary of Defense.

2. Such subordinate activities as may be established by the Director, DCPA, for the accomplishment of DCPA's mission.

B. The chain of command shall run from the Seeretary of Defense to the Director, DCPA.

V. RESPONSIBILITIES

The Director, DCPA, in eoordination with Federal, State and local governments, shall be responsible for the development and execution of:

A. *Civil Defense Preparedness*

1. A shelter program including evacuation and movement to shelter;

2. A chemical, biological and radiological warfare defense program;

3. Steps necessary to warn or alert Federal military and civilian authorities, State officials and the civilian population of enemy attack upon the United States. (Responsibility for developing, deploying and operating military surveillance and warning systems remains with the appropriate military department);

4. Civil defense communications, including an appropriate warning network, communications between authorities, and communications procedures for reporting on radiological monitoring and instructions to shelters;

5. Emergency assistance to State and local governments in a postattack period;

6. Protection and emergency operational capability of State and loeal government agencies in keeping with plans for the eontinuity of government;

7. Programs for making financial contributions for civil defense purposes to the States;

8. Plans and the operation of systems to undertake a nationwide postattack assessment of the nature and extent of the damage resulting from enemy attack and the surviving resourees, including systems to monitor and report specific hazards resulting from the detonation or use of special weapons. (Sueh assessment should address civilian resources, whereas the military departments retain primary responsibility for assessing damage to military resources);

9. Necessary arrangements for the donation of Federal surplus property in accordance with section 203(j)(4) of the Federal Property and Administrative Services Act of 1949, as amended (40 U.S.C. 484(j)(4)); and

10. The establishment and administration of a Civil Defense Advisory Committee to advise the Secretary of Defense.

B. *Natural Disaster Preparedness*

1. A program to utiiize and make availible the civil defense communieations system for the purpose of disaster warnings.

2. Programs to provide planning assistance to State and local governments in their development of natural disaster preparedness plans and eapabilities in accordance with III. A. 3.

VI. FUNCTIONS

Under its Director, DCPA, will perform the following funetions:

A. *Civil Defense Preparedness*

1. *Emergency Management Assistanee*

a. Provide financial assistance to State and local governments for necessary and essential civil defense personnei and administrative expenses and other authorized programs in aceordance with reference (a).

b. Provide guidance and assistance to State and local governments for comprehensive civil defense preparedness.

2. *National Shelter System*

a. In consonance with Presidential or Secretary of Defense poliey guidance, develop national program objectives and requirements for implementation for the National Shelter System against the effects of enemy attack.

b. Establish protection standards.

e. Perform shelter survey and marking using as appropriate the capability of the Department of Army Corps of Engineers and the Department of Navy Faciiities and Engineering Command, including shelter surveys on military installations upon request of the installation commander or furnish technieal support for survey work by installation personnel. DCPA will furnish technical guidance and materiei for marking of shelters on installations and shelter supplies as available and as requested by installation commanders.

d. Develop (1) guidance and provide technical assistance to State and local governments on survey design, construction, preparation, equipping and maintenance of shelters, and (2) methods of providing protection against enemy attack effects for use by State and local governments.

e. Develop techniques for the incorporation of protection into structures and encourage incorporation of protective features and vulnerability reduetion into new and existing Federal, federally assisted, and military facilities as well as other new and existing facilities in accordance with referenees (e) and (f).

f. Provide guidance to the Defense Supply Agency for the proeurement, storage, distribution, maintenance and disposal of DCPA supplies and equipment.

g. Develop plans for implementation during periods of international crises of an evacuation program and an expedient shelter prorgam.

h. Maintain inventory data on shelter facilities.

i. Provide guidance, information materiais, training and support to State and local governments relating to the development of shelters and shelter utilization plans.

3. *Civil Defense Warning and Communieations System*

a. In eooperation with the Department of the Army and in eoordination with the Assistant Secretary of Defense (Teleeommunications) assure the establishment, operation, management, and maintenanee of emergency communications for civil defense purposes between the Federal Government and the States and correlate the civil defense communications system with other DoD communications systems.

b. Provide technical assistance to State and local governments in establishing communications systems to support civil defense operations.

c. Develop programs to utilize the skills and equipment of radio amateurs.

d. Maintain liaison within the North American Air Defense Command (NORAD) Combat Operations Center for timely dissemination of attack warning data.

e. In cooperation with the Department of the Army and in correlation with DoD communications systems, establish, operate and maintain a national civil defense warning system for the transmission of enemy attack warning information to all levels of government and to the public.

f. Disseminate appropriate information on civil defense posture.

g. Provide to the Department of the Army current forecast of the resource support requirements for DCPA communications and civil defense warning systems for which the Department of the Army is assigned responsibilities.

4. *Radiological Monitoring and Reporting*

a. Procure, stockpile, grant or loan radiological defense equipment to Federal departments and agencies and State and local governments, and provide a system to store, distribute, replace, maintain and calibrate such equipment.

b. Provide criteria and guidance materials to assist Federal departments and agencies, State and local governments in developing, implementing, and operating radiological monitoring and reporting systems.

c. Develop and distribute guidance materials to assure standardization of procedures on use of radiological defense equipment.

d. Establish a system and procedures for reporting, analyzing, and evaluating radiological hazards resulting from an enemy attack.

e. Provide appropriate financial assistance to State and local governments for the maintenance of their radiological monitoring and reporting systems.

f. Plot the radiological information in an enemy attack situation and evaluate and analyze the broadscale hazards from radiological effects and make such information available to representatives of Federal departments and agencies, the military departments, DCPA regions and the States.

g. Provide guidance and assistance to State and local governments in preparing for and dealing with radiological accidents in accordance with agreements with other Federal departments and agencies.

5. *Emergency Public Information.* In consonance with the policy guidance of the Assistant Secretary of Defense (Public Affairs):

a. Provide pre-positioned information and materials to be used in enemy attack situations.

b. Provide policy guidance for broadcasting emergency public information on civil defense.

c. Provide survival instructions and other emergency information on civil defense to the public by press, radio and TV directly or through State and local governments as appropriate.

6. *Emergency Assistance to State and Local Governments (Postattack Period)*

a. Advise on measures to strengthen existing organizations and assure optimum effectiveness in utilization of resources for civil defense purposes.

b. Develop plans to provide Federal support and assistance to State and local governments for civil defense emergency operations.

c. Provide technical guidance and assistance to State and local governments to enable them to undertake civil defense emergency operations rapidly, and encourage industry, labor organizations, professional groups and civic organizations, to develop technical information and furnish assistance in developing emergency operations plans.

d. Determine quantities of supplies and equipment required to be stockpiled for civil defense purposes and coordinate the establishment of stockpile programs and deployment in an emergency, as appropriate.

7. *Damage Assessment*

a. Determine requirements and develop systems for estimating casualties and damage to civilian resources resulting from enemy attack; advise and assist Federal departments and agencies and State and local governments in establishing damage estimation systems, and application of techniques and procedures.

b. Maintain a data base of resources and services necessary for preattack planning of civil defense emergency operations, vulnerability reduction, damage estimation, and program evaluation.

c. Develop and provide technical weapons effects information, maps, and instructions related to estimating damage and for use in emergency operations.

d. Provide information to civil government on detonations resulting from enemy attack (Nuclear Detonation Reporting System); process, analyze, and evaluate enemy attack damage and situation information.

8. *Emergency Operating Centers (EOCs)*

a. Develop and establish design criteria for EOCs, establish and operate DCPA EOCs.

b. Provide appropriate financial assistance to State and local governments for planning, constructing and equipping EOCs.

c. Develop and establish criteria and provide guidance on location of State and local EOCs and provide guidance on equipping such centers.

9. *Training and Education*

a. Develop and establish programs to provide training for civil defense emergency planning and operations personnel requiring specialized training.

b. Support State and local civil defense and disaster preparedness training programs through instruction of potential State and local instructors. (Training programs in natural disaster preparedness will be conducted in consonance with policy guidance of the Director, OEP.)

c. Establish, operate, and maintain the Civil Preparedness Staff College and training centers; develop and conduct courses to familiarize officials of government, industry, and the military with the knowledge, skills, and techniques required by the Civil Defense Preparedness Program.

d. Provide appropriate financial assistance to State and local governments for civil defense training purposes.

e. Collaborate and maintain liaison with other Federal departments and agencies to utilize their training and education resources for civil defense preparedness purposes.

f. Provide technical guidance and assistance to nongovernment groups, associations, and organizations which conduct and sponsor civil defense preparedness training.

g. Establish general public education programs including the use of established school systems.

h. Prepare, publish, and maintain necessary and essential training materials for Federal, State, and local government use.

i. Formulate overall civil defense test and exercise programs:

(1) Direct, conduct, and participate in national exercises to determine adequacy, feasibility, and effectiveness of civil defense emergency operations, plans, activities, and systems.

(2) Coordinate with and provide Federal departments and agencies and State and local governments with assumptions, guidelines, aid, and situational material necessary for participating in national, State or local civil defense exercises.

j. Provide technical guidance and assistance to specialized professional groups, such as architects, engineers, and urban designers, whose expertise is related to shelter development.

k. Establish specialized education programs for professional persons, whose expertise is related to shelter development, including faculty of professional schools in selected universities.

10. *Public Information.* In consonance with policy guidance of the Assistant Secretary of Defense (Public Affairs) and in accordance with the statutory authority (50 U.S.C. App. 2281(f)) to publicly disseminate civil defense information:

a. Develop a comprehensive national public information program (to include preparation and distribution of information materials) on the programs of the DCPA.

b. Advise and assist Federal, State and local authorities and agencies, as well as information media, businesses and industries, labor, and national organizations and civic groups in the preparation and conduct of activities in support of the national information program.

c. Prepare and distribute emergency information materials dealing with measures and actions useful to individuals, families, and community groups at the time of a disaster caused by enemy attack.

11. *Federal Assistance*

a. Assist State and local governments with Federal funds and, working through the Department of Health, Education and Welfare, with Federal surplus property for civil defense purposes.

b. In coordination with the Director, Defense Supply Agency, participate in the DoD property utilization program for authorized purposes.

12. *Research and Development*

a. In coordination with the Director of Defense Research and Engineering, develop, establish, and administer research and development projects designed to meet existing and projected needs for civil defense planning and operations.

b. Compile, review, analyze, and evaluate available research and data from research sources to determine applicability for civil defense purposes and to assure utilization by civil defense organizations.

13. *International Activities*

a. In cooperation with the Department of State and in coordination with the Assistant Secretary of Defense (Installations and Logistics) maintain liaison with and assist friendly foreign nations and international organizations in developing and improving civil defense programs.

(1) Represent the U.S. in NATO civil defense committee meetings, and in other international conferenees, and develop and coordinate the U.S. position with respeet to all phases of civil defense planning.

(2) Maintain a program for the exchange of public, technical and research information on civil defensc with friendly foreign nations and international organizations.

b. Consult and cooperate with Canadian officials on civil emergency planning in order to aehieve maximum degree of compatibility feasible between emergency plans and systems of the two countries in accordance with reference (1).

14. *Civil Defensè Advisory Committee*

a. The Civil Defense Advisory Committee is hereby established to advise the Secretary of Defense on the Civil Defense Program for which the Secretary of Defense is responsible pursuant to Executive Order 10952 (reference (b)). The Committee Chairman will be the Director, DCPA. Members will inelude:

Representatives of the Secretaries of the Military Departments
Representative of the Assistant Secretary of Defense (Comptroller)
Representative of the Assistant Secretary of Defense (Installations and Logistics)
Representative of the Assistant Seeretary of Defense (Systems Analysis)
Representative of the Chairman, Joint Chiefs of Staff
Representativc State and Local Government Civil Defense Offieials

b. State and loeal government civil defense members of the Committee shall be nominated by the Direetor, DCPA, and appointed and requested to serve at the pleasure of the Seeretary of Defense.

e. The Director, DCPA, as Chairman will:

(1) Develop parameters and functions of the Committee eonsistent with 14.a. above.

(2) Coordinate, sehedule, and prepare agenda for meetings of the Committee and provide administration and reporting requirements therefor.

B. *Natural Disaster Preparedness Assistance*

1. In accordanee with agreements between the Direetor, DCPA, aeting on behalf of the Seeretary of Defense and the Director, OEP, and subject to the policy guidanee of the Direetor, OEP, DCPA shall:

a. Advise and assist State and local governments in their development of dual purpose disaster preparedness plans (enemy attack and natural disaster).

b. Provide detailed assessment of the status of loeal government emergency preparedness to respond to major disasters and other local emergeneies.

c. Assist State and local governments in their tralning of State and local offieials for disaster emergeney operations.

2. Make available and utilize the civil defense eommunieations system for the purpose of natural disaster warning pursuant to Exeeutive Order 11575 (referenee (e)).

3. Assist State and loeal governments in times of emergency through loan of DCPA stockpiled supplies and equipment.

VII. AUTHORITIES

A delegation of the administrative authorities required by the Director, DCPA, to administer and direct the operations of the Agency is contained in Enelosure 1 of this Direetive. In the performanee of assigned responsibilities and funetions of the Agency, the Director, DCPA, is speeifieally delegated authority to:

A. Operate and eontrol the aetivities and facilities assigned to DCPA.

B. Have free and direet aecess to and eommunieation with DoD Components and other executive departments and ageneies as neeessary in the performance of DCPA funetions.

C. As authorized and direeted by the Seeretary of Defense, prescribe DoD-wide procedures, standards, and praetices governing the exeeution of assigned responsibilities and functions.

D. Obtain from any DoD component information whieh is necessary for the performance of DCPA funetions.

E. Direct the eonsolidation, centralization, or elimination of DCPA facilities, operations, and functions in order to aehieve maximum effieieney, economy, and effectiveness.

F. Submit annually through the Secretary of Defensc a written report to the President and the Congress eovering expenditures, eontributions, work, and accomplishments aeeompanied by sueh recommendations as deemed appropriate pursuant to Seetion 2258, 50 U.S.C. App. (reference (a)) and Section 5, referenee (b).

G. Prepare and submit the annual civil defensc budget in aecordanee with the policies and proeedures prescribed by the Assistant Secretary of Defense (Comptroller).

H. Provide membership on the Joint United States/Canada Civil Emergeney Planning Committee (JCEPC).

VIII. COROLLARY RESPONSIBILITIES

A. The Secretary of the Army will provide communications support to the Director, DCPA, to carry out the assigned communicatlons and warning responsibilities and functions of the Ageney. Such support will include budgeting, funding, procurement, field (user) level of operation and maintenance. The Department of the Army will provide depot level maintenance support in aeeordanee with the annual memorandum of instruction delineated in VIII. C. below. This support includes:

1. Direet support of DCPA's national, state, and local communications and warning programs.

2. Planning, programing, detailed engineering, procurement, transportation, installation, testing, acceptance, manning activation, operation, maintenarce, training, logistics of assigned DCPA communclations and warning systems (excludes investment funding and deployment for the Decision Information Distribution System (DIDS–CD)). Programing of major telecommunications requirements will be in accordance with DoD Directive 4630.1 (reference (k)).

3. Developing eommunieations subsystem/project plans.

4. Maintenanee of the DCPA Radiologieal Defense Instrumentation Test Facility (RADITF).

5. Providing priority to DCPA eommunieations and warnlng systems.

6. Advising the Director, DCPA, of shortages of funds, personnel, or facilities whieh would prevent effective operation and maintenanee of existing systems or prevent or delay scheduled implementation of new facilities; coordinating with the Direetor, DCPA, on adjustments in approved program funds, personnel, or faeilities that would affect the schedule or scope of new projeets or the fulfillment of ongoing projects.

B. The Seeretaries of the Army and the Navy will provide, as available assets permit, engineering support to the Direetor, DCPA, to carry out the shelter survey and marking program and Emergeney Operations Center (EOC) responsibilities and functions of the Ageney. When such serviees do not interfere with primary military missions, engineering support will include shelter survey and eommunity shelter planning activities, as requested by DCPA to support State and loeal governments in earrying out civil defense responsibilities; eonstruetion serviees, including planning, design and supervision of eonstruction, and other technieal support and serviees as requested by DCPA.

C. The Director, DCPA, will furnish annual memoranda of instruetion, or their equivalent, within the DCPA 5-year program projeetion, to the Secretary of the Army deseribing program areas and types of support required. These memoranda will establish program details based on available funds for a partieular fiscal year, together with suitable work orders and neeessary funds to aeeomplish the work direeted. (Manpower requirements necessary to perform assigned engineering support of DCPA missions will be prepared in eoordination with the Assistant Seeretary of Defense (Manpower and Reserve Affairs) and will be eonsidered in the establishment of the Department of the Army civilian manpower eeilings.)

D. The Seeretary of the Army will provide administrative support to the Director, DCPA, in aeeordanee with agreements between the Secretary of the Army and the Director, DCPA.

E. DoD real property faeilities used by DCPA shall be under the jurisdietion of the Department of the Army and permitted for use by DCPA.

F. The Director, Defense Supply Ageney, will, on a reimbursable basis, provide logistics support to the Direetor, Defense Civil Preparedness Agency, for civil defense supplies and equipment. (Logistics support will eneompass transportation services and all elements of supply management to inelude eataloging, proeurement, sale, quality control, storage, distribution, inventory eontrol, reporting, maintenance, inspeetion surveillance of supplies in public fallout shelters and disposal service.)

IX. RELATIONSHIPS

A. In the performanee of his funetions, the Direetor, DCPA, shall:

1. Maintain appropriate liaison with other components of the DoD and other agencies of the exeeutive branch for the exehange of information on programs in the field of assigned responsibilities.

2. Maintain elose working relationship with the Department of the Army to insure integration of effort with respeet to military support of civil defense and military support in natural disasters.

3. Make full use of established faeilities in the Offiee of the Secretary of Defense, other DoD components, and other Government ageneies rather than unnecessarily duplicating such facilities.

4. Ensure that appropriate DoD eomponents are kept fully informed eoncerning DCPA aetivities of substantive eoneern to them.

5. Coordinate with the Joint Chiefs of Staff and the military departments, as appropriate, on aetions that would require

the employment of military forces or the use of military department resources.

B. The Assistant Secretary of Defense (Comptroller) will exercise primary staff supervision over DCPA on behalf of the Secretary of Defense. He shall prescribe prineiples and policies to be followed in connection with organizational and administrative matters related to the DCPA mission.

X. ADMINISTRATION

A. The Director shall be a civilian appointed by the Secretary of Defense.

B. The assignment to the Agency and its subordinate activities of other personnel will be in accordance with staffing plans approved by the Secretary of Defense.

C. Programing, budgeting, funding, auditing, and accounting activities of DCPA will be in accordanee with poliey and procedures established by the Assistant Secretary of Defense (Comptrolier).

XI. IMPLEMENTATION

A. Specific assignments in further implementation of responsibilities and functions described herein will be issued by means of the DoD Directive System.

B. Assumption of assigned responsibilities and funetions not already being performed by DCPA will be in accordanee with phased schedules approved by the Secretary of Defense.

XII. EFFECTIVE DATE

This Directive is effective immediately.

KENNETH RUSH
Deputy Secretary of Defense

Enclosures—2
1. Delegations of Authority
2. List of References

DELEGATIONS OF AUTHORITY

Pursuant to the authority vested in the Secretary of Defense, the Director, DCPA, or, in the absence of the Direetor, the person acting for him is hereby delegated, subject to the direetion, authority, and control of tho Secretary of Defense, and in accordance with DoD policies, directives, and instructions, and pertinent OSD regulations, authority as required in the administration and operation of DCPA to:

1. Exercise the powers vested in the Secretary of Defense by Sectlon 3101 of Title 5, U.S.C. and Section 302 of Title 5, U.S.C. pertaining to the employment, direction and general administration of DCPA civilian personnel.

2. Fix rates of pay for wage board employees exempted from the Classificatlon Act by 5 U.S.C. 5102(c)(7) on the basis of rates established under the Coordinated Federal Wage System. DCPA, in fixing such rates, shall follow the wage schedules established by DoD Wage Fixing Authority.

3. Establish such advisory committees and employ such part-time advisers as approved by the Secretary of Defense for the performance of DCPA functlons pursuant to the provisions of 10 U.S.C. 173, 5 U.S.C. 3109(b), and the Agreement between the DoD and the Civil Service Commission on employment of experts and consultants, dated July 22, 1959. This shall include the establishment of a Civil Defense Advisory Committee; State and local government civil defense members of the Committee shall be nominated by thc Director, DCPA but appointed and serve at the pleasure of the Secretary of Defense.

4. Administer oaths of office incident to entrance into the Executive Branch of the Federal Government or any other oath required by law in connection with employment therein, in accordance with the provisions of the Act of June 26, 1943, as amended, 5 U.S.C. 2903(b) and designate in writing, as may be necessary, officers and employees of DCPA to perform this function.

5. Establish a DCPA Incentive Awards Board and pay cash awards to and incur necessary expenses for the honorary recognition of civilian employees of the Government whose suggestions, inventions, superior accomplishments, or other personal efforts, including special acts or services, benefit or affect DCPA or its subordinate activities in accordanee with the provisions of the Act of September 1, 1954, as amended, 5 U.S.C. 4503 and Civil Service Regulations.

6. Perform the following in accordance with the provisions of the Act of August 26, 1950, as amended (5 U.S.C. 7532); Executive Order 10450, dated April 27, 1953, as amended; and DoD Directive 5210.7, dated September 2, 1966 (as revised):

a. Designate any appropriate position in DCPA as a "sensitive" position;

b. Authorize, in case of an emergency, the appointment of a person to a sensitive position in the Agency for a limited period of time for whom a full field investigation or other appropriate investigation, including the National Agency Cheek, has not been completed; and

c. Authorize the suspension, but not to terminate the services of an employee in the interest of national seeurity in positions within DCPA.

7. Clear DCPA personnel and such other individuals as may be appropriate fer access to classified Defense material and information in accordance with the provisions of DoD Directive 5210.8, dated February 15, 1962 (as revised), "Policy on Investigation and Clearance of Department of Defense Personnel for Access to Classified Defense Information" and of Executive Order 11652, dated March 8, 1972.

8. Act as agent for the collection and payment of employment taxes imposed by Chapter 21 of the Internal Revenue Code of 1954, and, as such agent, make all determinations and certifications required or provided for under Section 3122 of the Internal Revenue Code of 1954, 26 U.S.C. 3122, and Section 205 (p)(1) and (2) of the Social Security Act, as amended (42 U.S.C. 405(p)(1) and (2)) with respect to DCPA employees.

9. Authorize and approve overtime work for DCPA civilian officers and employees in accordance with the provisions of Section 550.111 of the Civil Service Regulations.

10. Authorize and approve:

a. Travel for DCPA civilian officers and employees in aecordance with Joint Travel Regulations, Volume 2, Department of Defense Civilian Personnel, datcd July 1, 1965, as amended.

b. Temporary duty travel only for military personnel assigned or detailed to DCPA in accordance with Joint Travel Regulations, Volume 1, for Members of the Uniformed Services, dated November 1969, as amended.

e. Invitational travel to persons serving without compensation whose consultive, advisory, or other highly specialized technical services are required in a capacity that is directly related to or in connection with DCPA activities, pursuant to the provisions of Section 5 of the Administrative Expenses Act of 1946, as amended (5 U.S.C. 5703).

11. Approve the expenditure of funds available for travel by military personnel assigned or detailed to DCPA for expenses incident to attendance at mectings of technical, scientific, professional or other similar organizations in such instances where the approval of the Secretary of Defense or his designee is required by law (37 U.S.C. 412). This authority cannot be redelegated.

12. Develop, establish, and maintain an active and continuing Records Management Program, pursuant to thc provisions of Section 506(b) of the Federal Records Act of 1950 (44 U.S.C. 3102).

13. Establish and use Imprest Funds for making small purchases of material and services other than personal for DCPA when it is determined more advantageous and consistent with the best intcrests of the Government, in accordance with the provisions of DoD Instruction 7280.1, dated August 24, 1970, and the Joint Regulation of the General Services Administration—Treasury Department—General Accounting Office, entitled "For Small Purchases Utilizing Imprest Funds."

14. Authorize the publication of advertisements, notices, or proposals in newspapers, magazines, or other public periodicals as required for the effective administration and operation of DCPA (44 U.S.C. 3702).

15. a. Establish and maintain appropriate Property Accounts for DCPA.

b. Appoint Boards of Survey, approve reports of survey, relieve personal liability, and drop accountability for DCPA property contained in the authorized Property Accounts that has been lost, damaged, stolen, destroyed, or otherwise rendered unservieeable, in accordance with applicable laws and regulations.

16. Promulgate the necessary security regulations for the protection of property and places under the jurisdiction of the Director, DCPA, pursuant to paragraph III.A. and V.B. of DoD Direetive 5200.8, dated August 20, 1954.

17. Establish and maintain, for the functions assigned, an appropriate publications system for the promulgation of common supply and service regulations, instructions, and reference documents, and changes thereto, pursuant to the policies and procedures prescribed in DoD Directive 5025.1, dated March 7, 1961.

18. Enter into support and service agreements with DoD Components or other Government agencies as required for the effective performance of responsibilities and functions assigned to DCPA.

19. Exercise the authority delegated to thc Secretary of Defense by thc Administrator of General Services Administration with respect to the disposal of surplus personal property.

20. Issue appropriate implementing documents and establish internal procedures to assure that the selection and acquisition of ADP resources are conducted within the policies contained in DoD Direetive 4105.55, dated May 19, 1972, the Federal Property Management Regulations and Armed Services Procurement Regulations.

21. Enter into and administer contracts, directly or through a Military Department, a DoD contract administration services eomponent, or other Government department or agency, as appropriate, for supplies, equipment and services required to accomplish the mission of the DCPA. Enter into contracts for supplies, equipment and services for civil defense purposes and, subject to thc limitation contained in Section 2311, Chapter 137, 10 U.S.C., to make the necessary determinations and findings required under that chapter.

DoD Directive 5105.43, July 14, 1972—Continued

The Director, DCPA, may redelegate these authorities as appropriate, and in writing, except as otherwise specifically indicated above or as otherwise provided by law or regulation.

This delegation of authorities is effective immediately.

List of References Continued

Refs.:

(f) Military Construction Authorization Act of 1967, as amended (P.L. 89–568; P.L. 90–110), 50 U.S.C. App. 2287

(g) DoD Directive 3025.1, "Employment of Military Resources in Natural Disaster Emergencies within the United States, its Territories and Possessions," August 30, 1971

(h) DoD Directive 3025.10, "Military Support of Civil Defense," March 29, 1965

(i) DoD Directive 5105.22, "Defense Supply Agency (DSA)," December 9, 1965

(j) DoD Directive 5100.30, "World-Wide Military Command and Control System (WWMCCS)," December 2, 1971

(k) DoD Directive 4630.1, "Programing of Major Telecommunications Requirements," April 24, 1968

(l) Civil Emergency Planning Agreement Between the United States of America and Canada Effected by Exchange of Notes signed at Ottawa August 8, 1967. (Treaties and other International Acts Series 6325)

(m) DoD Directive 5160.50, "Civil Defense Functions," March 31, 1964 (hereby cancelled)

(n) DoD Directive 5160.61, "Delegation of Authority—Use of Civil Defense Communications System for Disaster Warnings," March 6, 1971 (hereby cancelled)

APPENDIX D.

Executive Order 11575

PRESIDENTIAL DOCUMENTS

Title 3—The President
Executive Order 11575

As amended by E.O. 11662, March 29, 1972, at 37 F.R. 6563, Providing for the Administration of the Disaster Relief Act of 1970, as Amended

By virtue of the authority vested in me by the Disaster Relief Act of 1970, as amended, hereinafter referred to as the Act, and section 301 of title 3 of the United States Code, and as President of the United States, it is hereby ordered as follows:

SECTION 1. (a) The authorities vested in the President by section 102(1) of the Act to declare a major disaster, by section 251 of the Act to provide for the restoration of Federal facilities, and by section 253 of the Act to prescribe time limits for granting priorities for certain public facilities and certain public housing assistance are reserved to the President.

(b) Except as otherwise provided in subsections (a), (c), and (d) of this section, the Director of the Office of Emergency Preparedness is designated and empowered to exercise, without the approval, ratification, or other action of the President, all of the authority vested in the President by the Act.

(c) The Secretary of Defense is designated and empowered to exercise, without the approval, ratification, or other action of the President, all of the authority vested in the President by section 210 of the Act concerning the utilization and availability of the civil defense communications system for the purpose of disaster warnings.

(d) The Secretary of Agriculture is designated and empowered to exercise, without the approval, ratification, or other action of the President, all of the authority vested in the President by section 238 of the Act concerning food coupons and surplus commodities.

SEC. 2. The Director of the Office of Emergency Preparedness may delegate or assign to the head of any agency of the executive branch of the Government, subject to the consent of the agency head concerned in each case, any authority or function delegated or assigned to the Director by the provisions of this order. Any such head of agency may redelegate any authority or function so delegated or assigned to him by the Director to any officer or employee subordinate to such head of agency whose appointment is required to be made by and with the advice and consent of the Senate.

SEC. 3. Rules, regulations, procedures, and documents issued under the authority of the Act of September 30, 1950 (64 Stat. 1109) the Disaster Relief Act of 1966 (80 Stat. 1316); and the Disaster Relief Act of 1969 (83 Stat. 125) shall remain in effect for purposes of the Act unless otherwise modified, superseded, or revoked by the appropriate Federal official, and, unless inappropriate, all references in those rules, regulations, procedures, and documents or in any Executive order or other document to the Act of September 30, 1950, the Disaster Relief Act of 1966, or the Disaster Relief Act of 1969 shall be deemed to be references to the Act.

SEC. 4. In order to assure the most effective utilization of the personnel, equipment, supplies, facilities, and other resources of Federal agencies pursuant to the Act, agencies shall make and maintain suitable plans and preparations in anticipation of their responsibilities in the event of a major disaster. The Director of the Office of Emergency Preparedness shall coordinate, on behalf of the President, such plans and preparations.

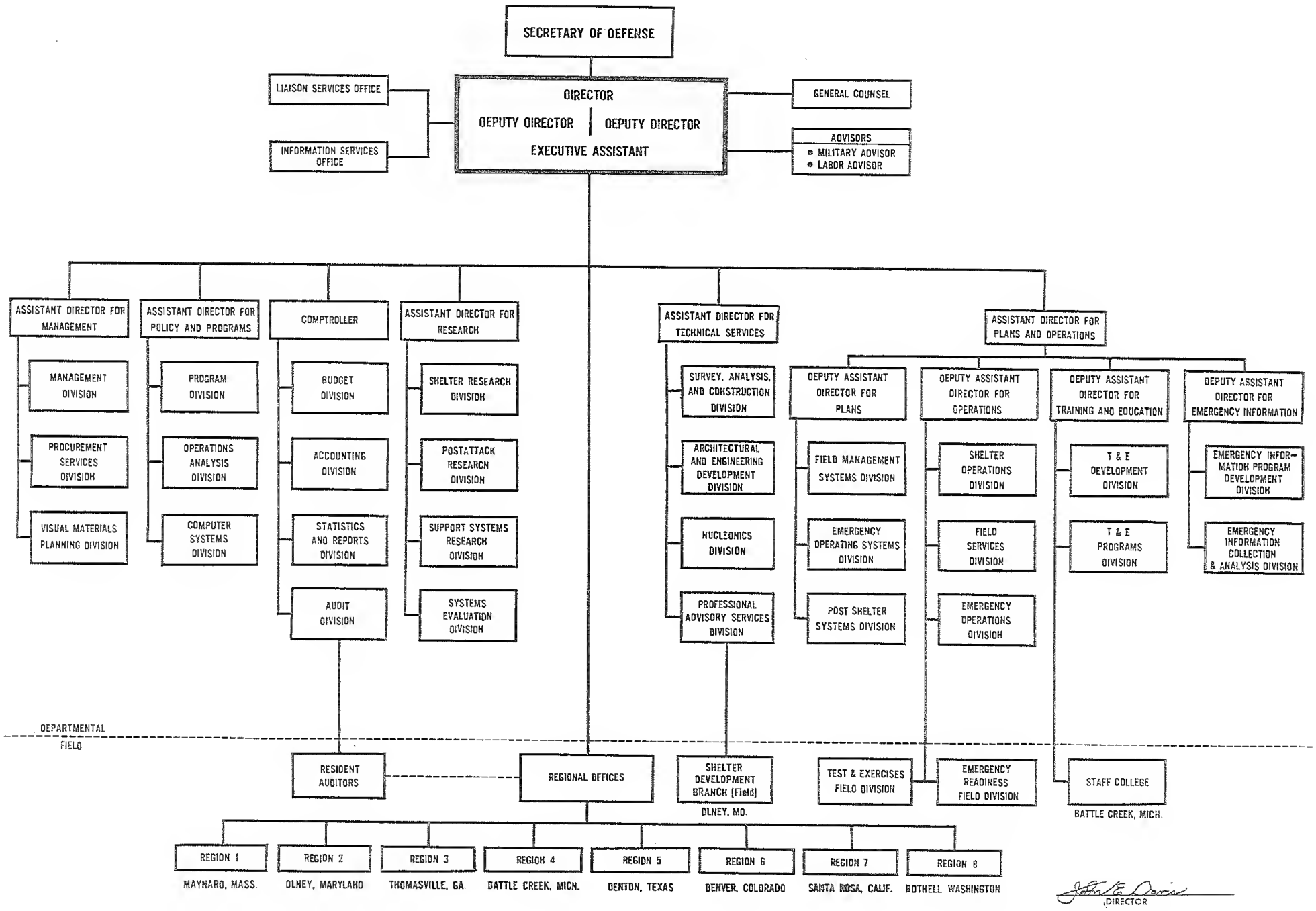
SEC. 5. Executive Order No. 10427 of January 16, 1953, Executive Order No. 10737 of October 29, 1957, and Executive Order No. 11495 of November 18, 1969, are hereby revoked. Unless inappropriate, any reference to those Executive orders in any rule, regulation, procedure document, or other Executive order, shall be deemed to be a reference to this Executive order.

RICHARD NIXON

THE WHITE HOUSE,
December 31, 1970.

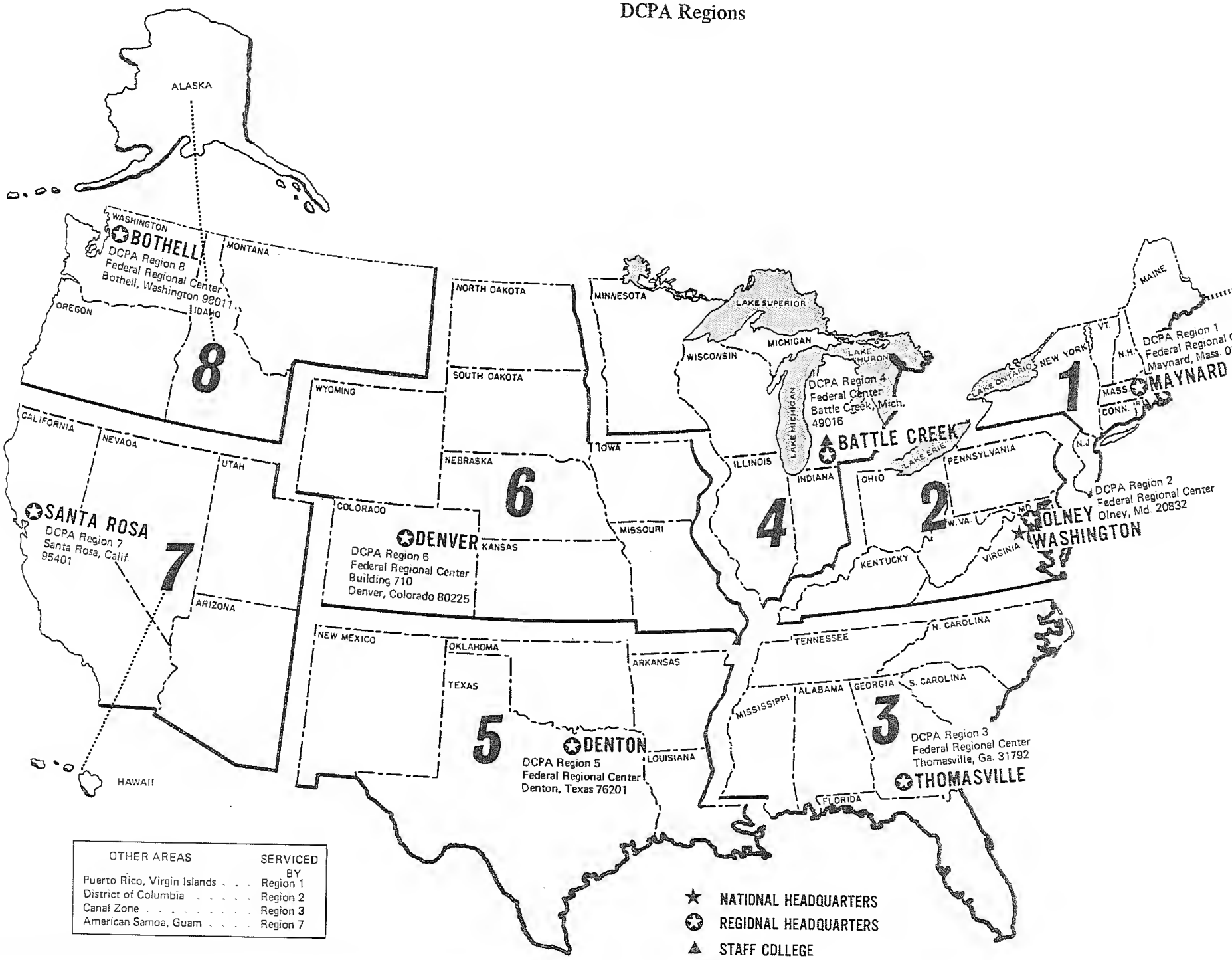
[F.R. Doc. 71–175; Filed, Jan. 4, 1971; 9:03 a.m.]

DCPA Organization Chart



John E. Davis
DIRECTOR

DCPA Regions



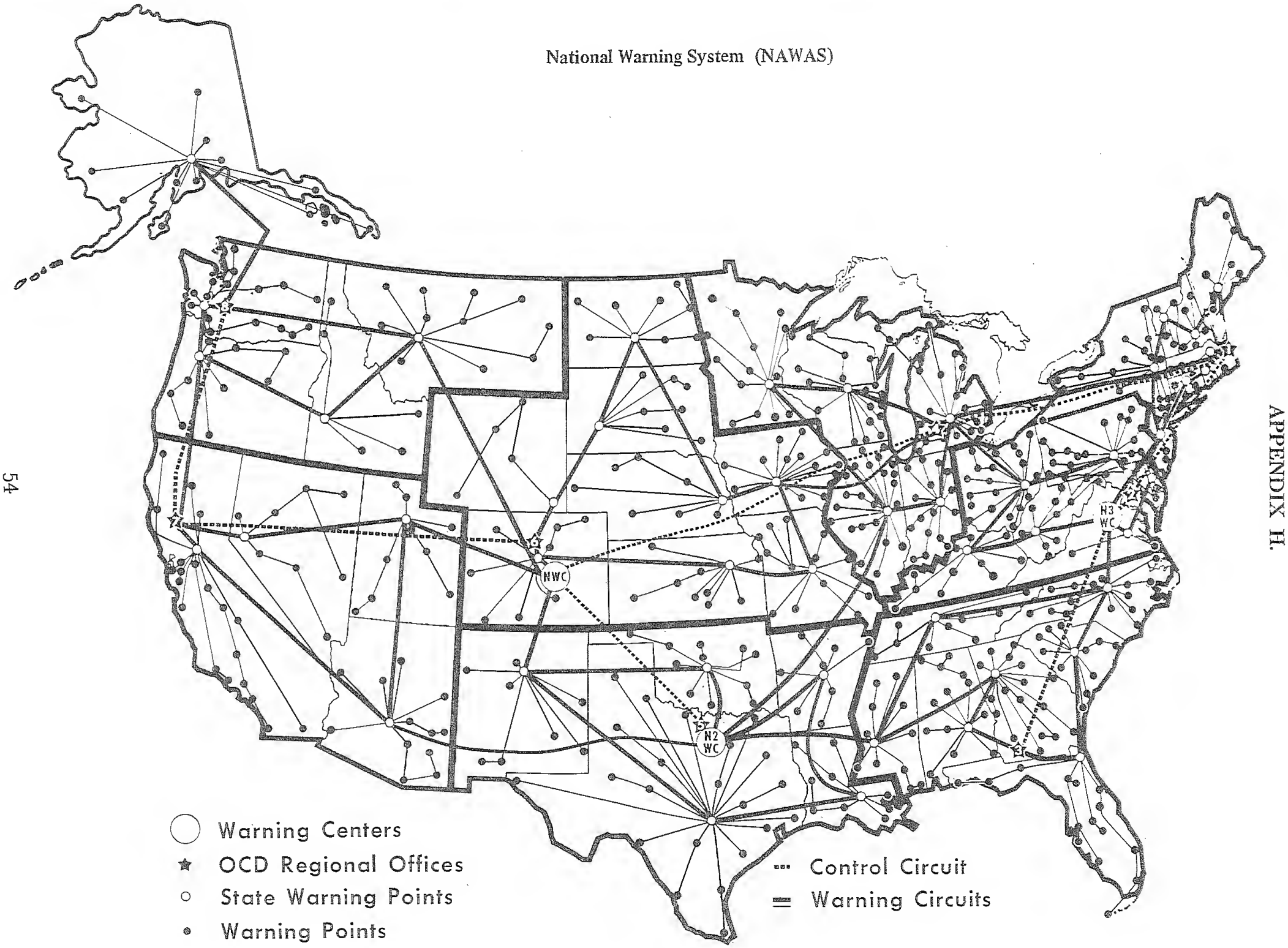
APPENDIX G.

TABLE 1.—Financial summary for fiscal year 1972
(In thousands)

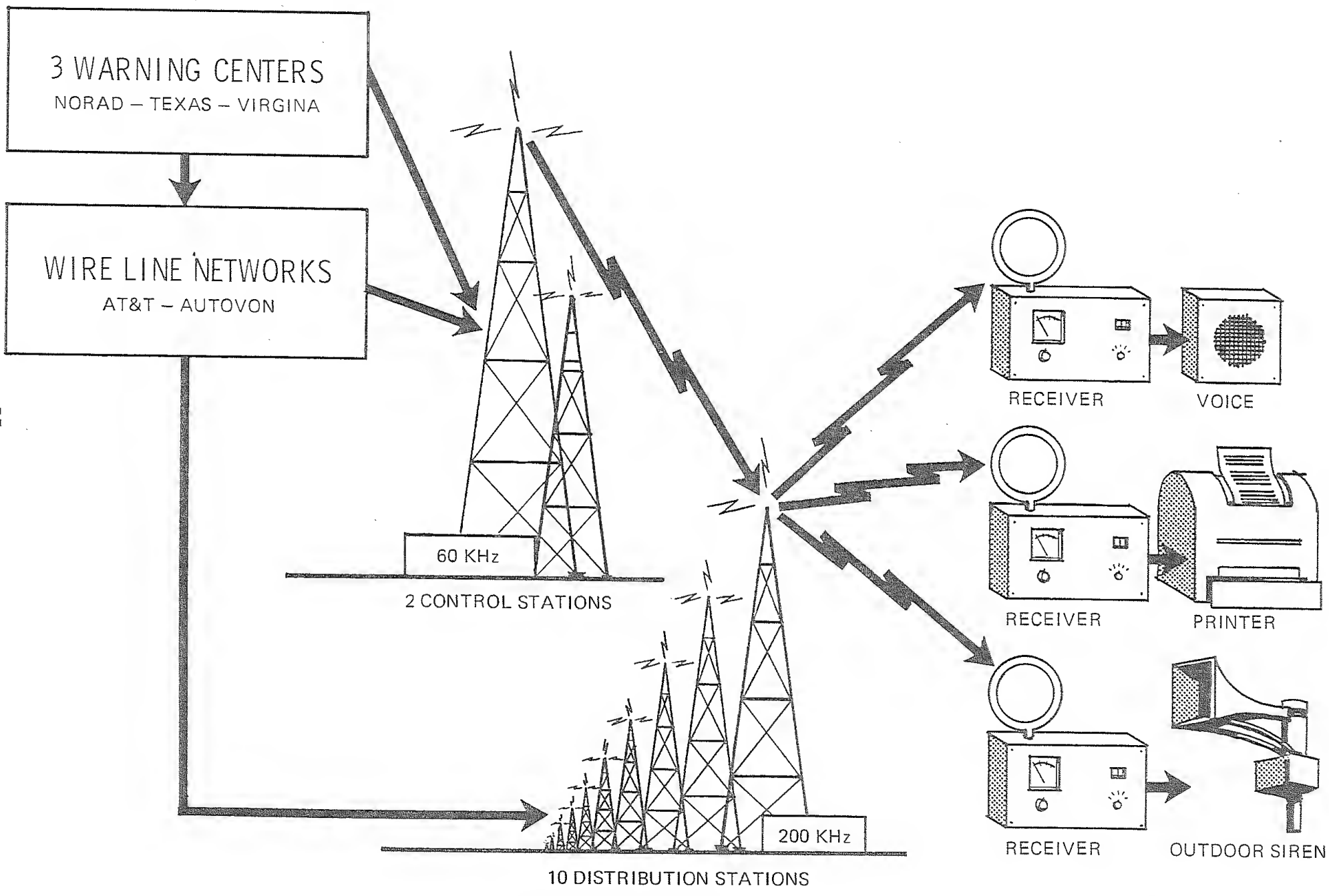
Budget aetivity	Funds pro-gramed for obligation	Funds obligated
GRAND TOTAL	$83, 711	$80, 880
OPERATIONS AND MAINTENANCE, TOTAL	55, 213	54, 747
Warning and detection	4, 537	4, 529
Warning systems	457	457
Deteetion and monitoring systems	328	326
Warehousing and maintenance	3, 752	3, 746
Emergency operations	11, 049	10, 772
Broadcast station protection program	170	147
Damage assessment operational analyses	196	194
Training and education	7, 127	6, 957
Emergency operations planning	643	637
National civil defense computer facility	1, 399	1, 379
Emergency water supply equipment	370	369
Emergency information	994	940
Other emergency operations activities	150	150
Financial assistance to States	24, 338	24, 326
Survival supplies, equipment and training	1, 438	1, 433
Personnel and administrative expenses	22, 900	22, 893
Management	15, 289	15, 120
RESEARCH, SHELTER SURVEY AND MARKING, TOTAL	28, 498	26, 133
Shelters	17, 318	15, 347
Shelter	9, 793	8, 925
Community shelter planning	3, 876	3, 187
Decision information distribution system	3, 073	2, 841
Federal regional emergeney operating eenters	139	30
Shelter stoeking	437	364
Emergeney operating eenters	7, 075	6, 817
State and local emergeney operating eenters	4, 893	4, 735
State and local supporting systems equipment	2, 182	2, 082
Rcseareh and development	4, 105	3, 970

Figures may not add to exact totals due to rounding.

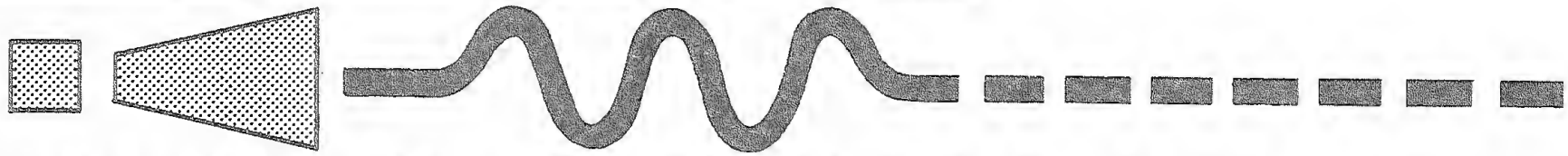
National Warning System (NAWAS)



System Plan for DIDS



THE ATTACK WARNING SIGNAL

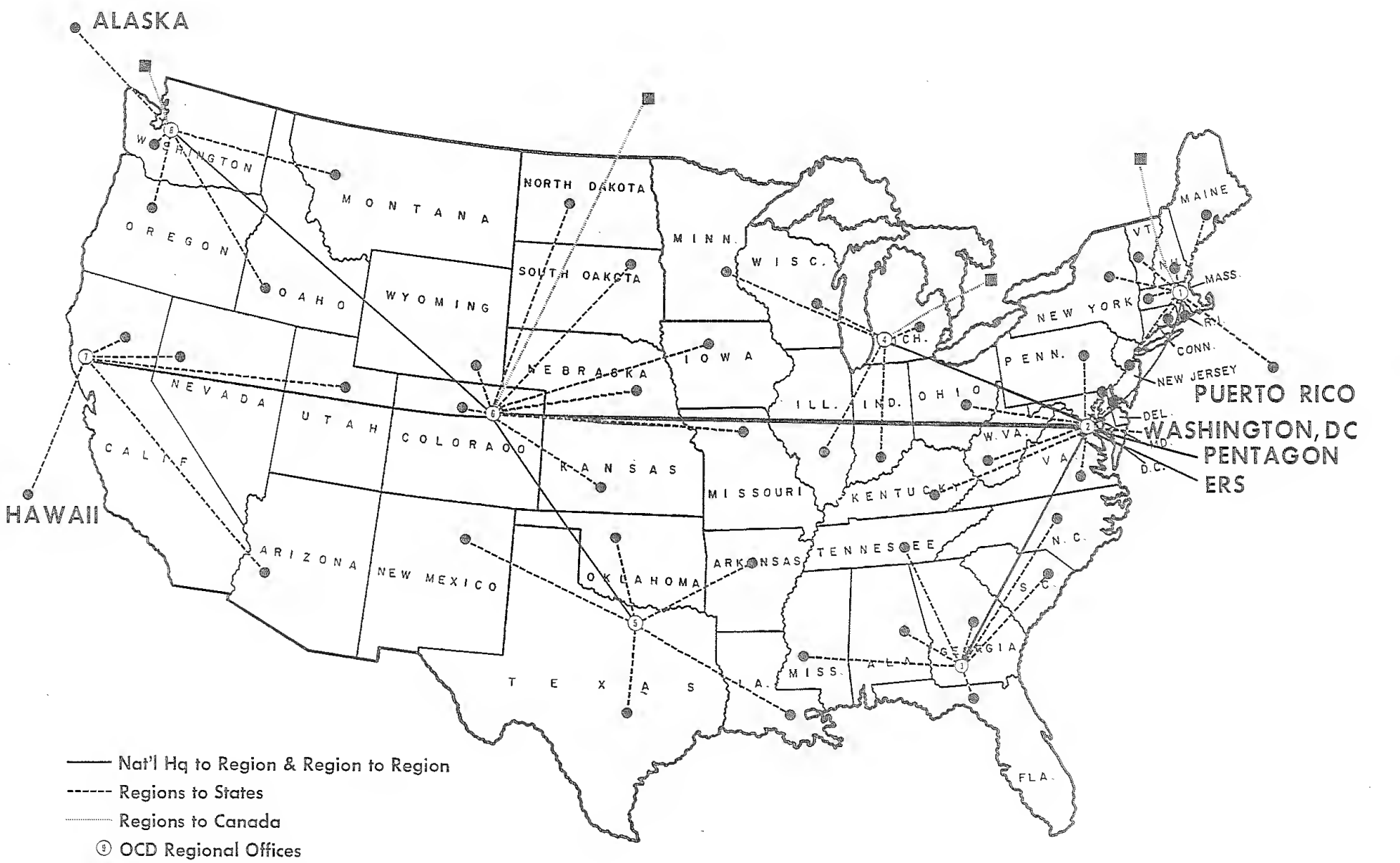


A WAVERING TONE OR SHORT BLASTS FOR 3 TO 5 MINUTES --
ACTUAL ATTACK AGAINST THIS COUNTRY HAS BEEN DETECTED --
TAKE PROTECTIVE ACTION IMMEDIATELY !

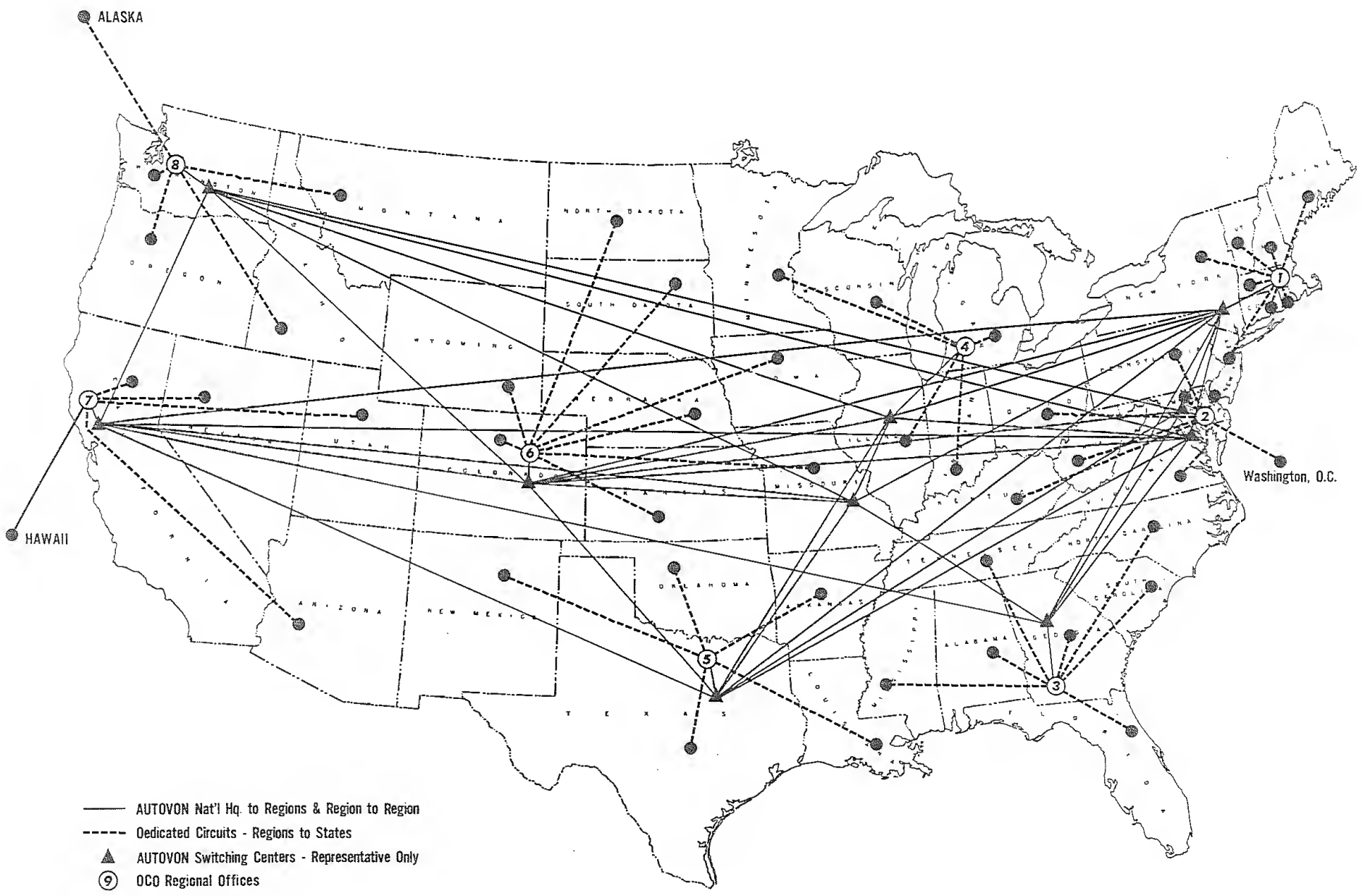
THE ATTENTION OR ALERT SIGNAL

A STEADY BLAST OR TONE FOR 3 TO 5 MINUTES --
LISTEN FOR ESSENTIAL EMERGENCY INFORMATION !
(Authorized for peacetime emergencies)

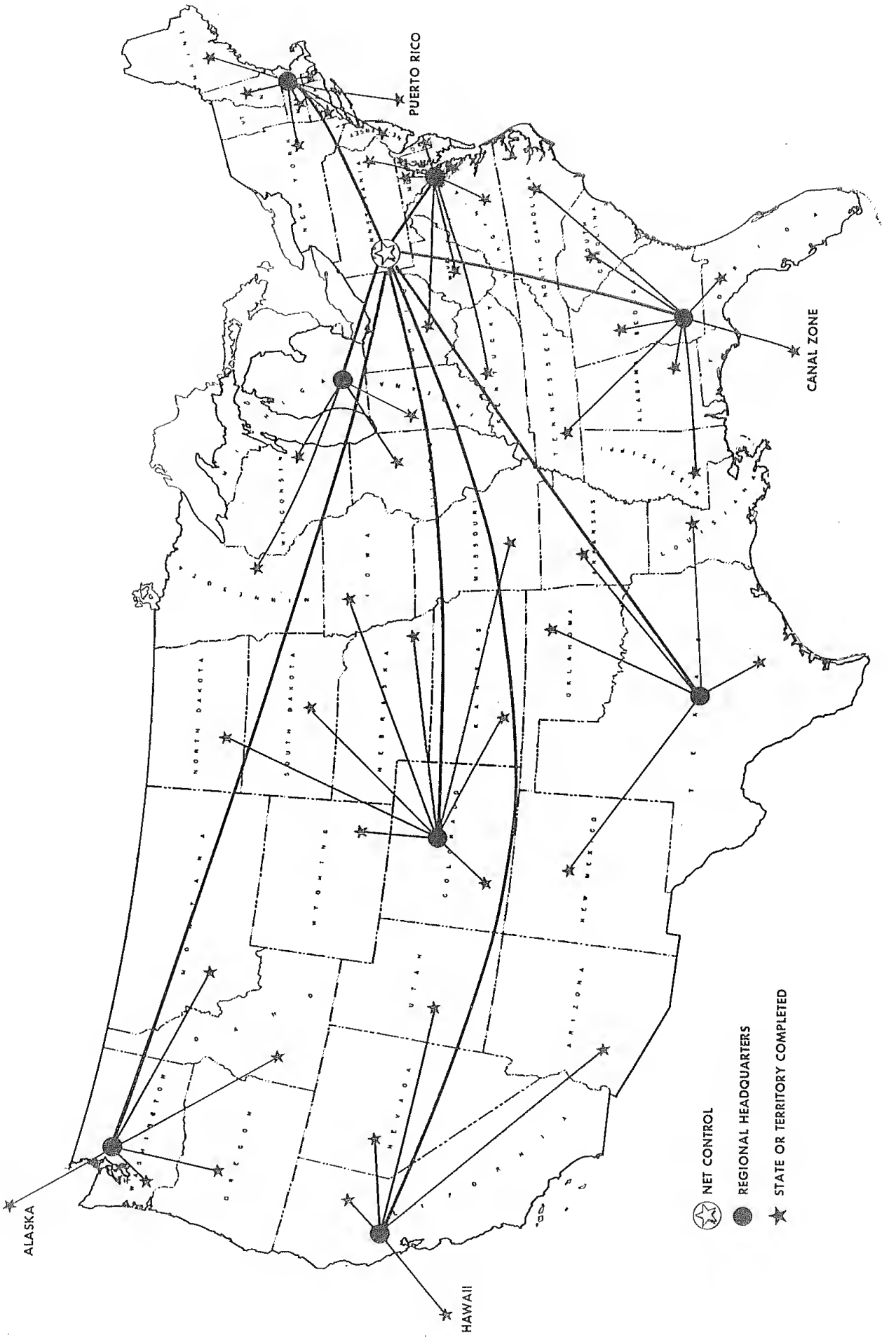
Civil Defense National Teletype System



Civil Defense National Voice System



APPENDIX M.

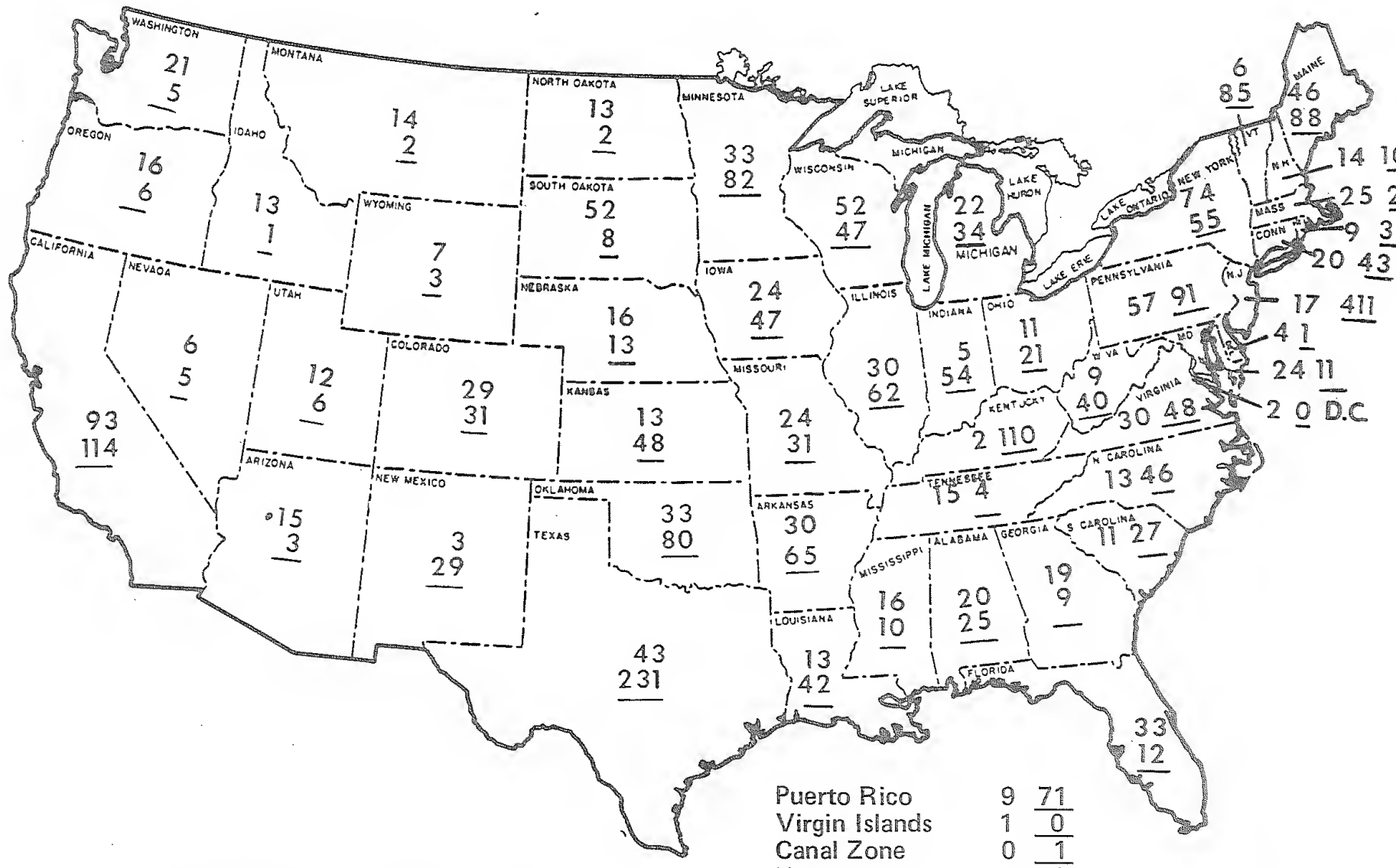


Civil Defense National Radio System

STATE & LOCAL EMERGENCY OPERATING CENTERS

(in planning, under construction, construction completed, being equiped and operational)

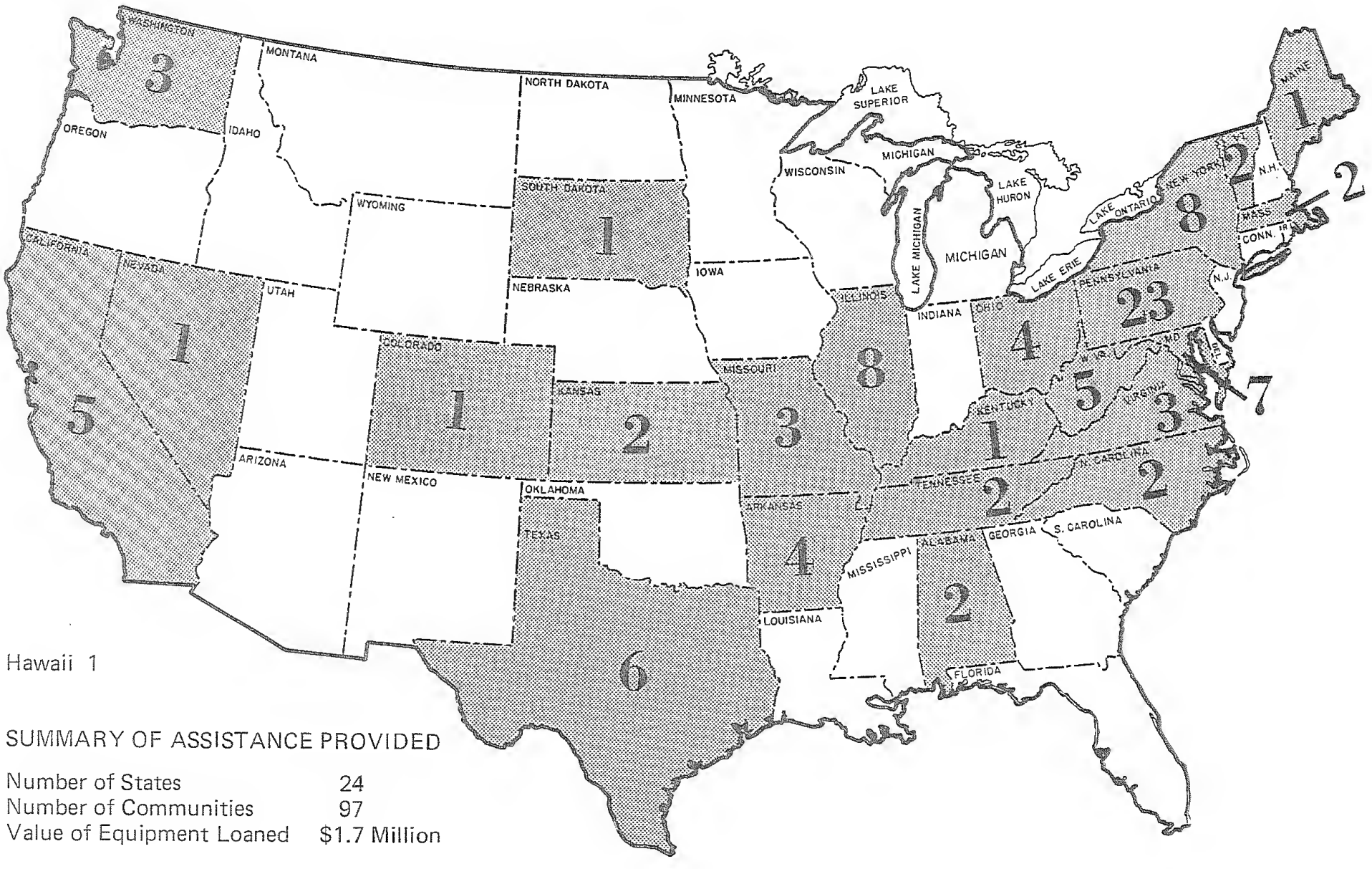
JUNE 30, 1972



Puerto Rico	9	71
Virgin Islands	1	0
Canal Zone	0	1
Hawaii	7	2
American Samoa	0	0
Guam	0	0
Alaska	3	1

Top Number - Federal Matching Funds	1,129
Underscored - No Federal Funds	2,691
TOTAL	3,820

DCPA Emergency Water Supply Equipment on Loan in Fiscal Year 1972



Hawaii 1

SUMMARY OF ASSISTANCE PROVIDED

Number of States	24
Number of Communities	97
Value of Equipment Loaned	$1.7 Million

TABLE 2.—Fallout shelter located, licensed, marked, and stocked[1]

Area	LOCATED				LICENSED				MARKED				STOCKED (With General Supplies)					
	Facilities		Spaces (000)[2]		Facilities		Spaces (000)[2]		Facilities		Spaces (000)[2]		Facilities		Spaces (000)[2]			
															Rated Capacity		Stocked Capacity	
	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative, End of FY 1972	During FY 1972	Cumulative End of FY 1972
TOTAL	6, 789	217, 171	9, 100	212, 617	1, 192	129, 149	2, 882	135, 234	663	118, 264	2, 060	116, 448	−676	105, 722	841	107, 542	−199	65, 431
REGION ONE	910	68, 488	1, 378	59, 958	212	39, 525	546	36, 754	216	40, 242	261	32, 923	−658	32, 802	−479	28, 539	−188	17, 690
Connecticut	276	4, 057	187	3, 687	17	2, 027	101	2, 393	−6	1, 490	56	1, 826	7	1, 794	52	1, 920	16	1, 073
Maine	25	1, 247	21	646	28	912	18	505	−6	847	−3	468	6	865	−3	447	6	412
Massachusetts	134	7, 824	199	6, 130	11	4, 649	−11	3, 681	−16	3, 991	−20	3, 061	−17	3, 675	−16	2, 950	−2	1, 990
New Hampshire	98	843	74	477	7	487	42	318	−6	395	37	274	0	424	28	274	0	201
New Jersey	−107	8, 025	361	7, 303	−15	4, 543	6	4, 289	213	4, 596	79	4, 338	7	3, 773	−1	3, 650	0	2, 331
New York	228	42, 553	181	38, 669	90	24, 166	189	23, 614	−34	26, 598	16	21, 512	−675	19, 910	−588	17, 828	−223	10, 509
Rhode Island	52	1, 263	161	1, 075	19	1, 052	36	821	0	825	28	635	13	941	39	716	16	547
Vermont	43	519	25	242	21	352	18	101	−1	293	8	164	0	324	8	168	0	127
Puerto Rico	138	2, 119	163	1, 720	26	1, 324	147	950	72	1, 194	59	642	1	1, 083	0	574	0	498
Virgin Islands	23	38	6	8	0	13	0	2	0	13	0	2	0	13	0	2	0	2
REGION TWO	1, 361	44, 849	1, 645	44, 216	60	23, 776	277	26, 359	113	22, 930	199	24, 135	−75	18, 814	138	21, 046	−26	10, 231
Delaware	−1	859	2	568	−3	524	−1	433	−3	469	0	367	−2	498	0	369	0	205
District of Columbia	3	5, 850	−38	7, 167	1	1, 664	−66	4, 133	0	1, 600	0	3, 859	0	1, 364	0	3, 552	0	762
Kentucky	171	2, 035	330	2, 772	6	1, 411	22	1, 833	−1	1, 271	9	1, 670	−1	1, 237	21	1, 444	3	1, 126
Maryland	294	3, 564	577	4, 703	107	2, 415	230	2, 017	1	2, 094	26	2, 109	−6	1, 904	61	2, 068	2	1, 059
Ohio	150	8, 731	108	8, 030	−47	4, 983	36	4, 163	−21	4, 877	86	3, 911	2	3, 861	40	3, 157	−2	2, 014
Pennsylvania	250	16, 572	332	15, 359	−3	9, 463	34	9, 954	141	8, 941	68	9, 011	37	7, 525	56	8, 225	13	3, 650
Virginia	467	6, 143	270	4, 831	3	2, 603	10	2, 541	−1	3, 002	10	2, 794	−105	1, 821	−46	1, 829	−41	1, 049
West Virginia	27	1, 095	63	705	−4	713	11	485	−3	676	−2	413	0	604	7	402	0	366
REGION THREE	1, 429	17, 831	2, 176	19, 551	310	11, 729	736	13, 096	11	10, 036	475	11, 232	27	9, 582	400	9, 972	3	6, 760
Alabama	129	2, 458	78	1, 772	59	1, 807	35	1, 420	0	1, 484	7	1, 145	−1	1, 519	9	1, 175	−1	939
Florida	207	3, 138	549	5, 634	48	1, 900	179	3, 157	36	1, 494	235	2, 651	0	1, 312	110	1, 879	0	1, 128
Georgia	555	3, 954	930	5, 181	−14	2, 270	171	3, 360	−3	2, 011	130	3, 057	3	1, 817	139	2, 689	0	1, 322
Mississippi	21	856	13	524	4	620	1	443	2	562	1	400	0	530	5	409	−29	402
North Carolina	226	3, 289	247	2, 729	159	2, 457	269	2, 173	−14	2, 052	66	1, 796	25	2, 111	76	1, 772	30	1, 403
South Carolina	181	1, 531	106	1, 127	43	975	40	798	5	822	25	644	3	719	35	592	0	417
Tennessee	110	2, 352	253	2, 494	11	1, 587	31	1, 691	−15	1, 537	12	1, 491	−3	1, 469	26	1, 401	3	1, 092
Canal Zone	0	253	0	90	0	105	0	54	0	74	0	49	0	105	0	54	0	56
REGION FOUR	1, 601	31, 232	1, 595	32, 556	264	18, 967	520	20, 768	241	16, 137	588	16, 721	76	16, 812	421	17, 691	17	10, 786
Illinois	247	9, 634	293	11, 579	15	5, 439	63	6, 851	−9	4, 829	33	5, 229	−14	4, 856	40	5, 528	−1	3, 088
Indiana	394	3, 531	460	3, 321	53	2, 072	75	2, 000	−8	1, 772	51	1, 693	−1	1, 983	56	1, 860	−1	1, 489
Michigan	365	6, 315	235	7, 061	17	3, 353	24	4, 163	9	2, 840	1	3, 428	−1	2, 994	5	3, 635	0	1, 868
Minnesota	283	6, 053	317	5, 902	114	4, 099	199	4, 372	155	3, 709	164	3, 871	2	3, 361	54	3, 578	−1	2, 256
Wisconsin	312	5, 699	290	4, 693	65	4, 004	159	3, 382	94	2, 987	339	2, 500	90	3, 618	265	3, 090	20	2, 085
REGION FIVE	471	11, 930	930	13, 490	88	8, 473	306	10, 204	20	7, 077	275	8, 991	−8	6, 463	216	8, 673	−24	5, 915
Arkansas	8	1, 718	10	1, 019	0	1, 372	0	852	0	1, 339	0	846	0	649	1	681	0	438
Louisiana	90	1, 179	190	1, 665	0	789	65	1, 162	−9	740	63	1, 073	0	682	51	1, 028	0	849
New Mexico	112	996	109	664	17	663	45	471	−13	446	30	363	2	530	33	389	1	317
Oklahoma	122	2, 525	438	2, 579	40	1, 710	124	1, 854	9	1, 383	118	1, 673	−18	1, 436	100	1, 681	−16	1, 213
Texas	139	5, 512	184	7, 564	31	3, 939	73	5, 066	33	3, 169	63	5, 035	8	3, 166	34	4, 896	−8	3, 099
REGION SIX	310	20, 678	323	15, 032	85	13, 264	118	10, 234	40	11, 596	74	9, 006	−29	10, 626	22	8, 407	23	5, 716
Colorado	22	2, 680	11	2, 256	7	1, 686	15	1, 498	11	1, 723	14	1, 335	−7	1, 346	−6	1, 271	−14	939
Iowa	86	3, 726	28	1, 978	103	2, 378	36	1, 394	49	2, 134	13	1, 396	0	1, 790	2	1, 108	−15	833
Kansas	27	3, 689	12	2, 255	16	2, 424	8	1, 650	4	2, 170	−1	1, 526	0	1, 899	−2	1, 343	0	881
Missouri	151	5, 468	252	5, 888	−113	2, 719	34	3, 542	−42	2, 174	39	2, 922	−18	2, 024	22	2, 792	51	1, 437
Nebraska	14	2, 360	4	1, 432	56	1, 702	11	1, 100	−4	1, 316	0	893	0	1, 516	0	1, 005	0	804
North Dakota	−2	973	0	460	1	074	−4	417	25	774	9	376	0	817	0	372	0	357
South Dakota	12	1, 186	14	489	14	1, 025	18	450	−3	931	0	383	0	881	6	362	−1	319
Wyoming	0	596	0	273	1	456	0	184	0	366	0	175	−4	353	−1	154	−1	145
REGION SEVEN	529	15, 212	632	21, 613	108	8, 419	264	13, 457	9	5, 958	132	9, 627	−5	6, 223	68	9, 588	−2	5, 544
Arizona	2	910	2	983	−23	666	1	740	2	595	2	612	−1	500	2	566	0	522
California	395	10, 683	508	17, 877	−7	5, 669	144	10, 890	−39	3, 617	71	7, 534	−1	4, 083	67	7, 566	−1	3, 806
Hawaii	22	679	54	707	30	422	62	495	5	238	4	220	−1	317	0	398	0	340
Nevada	5	630	20	747	5	430	3	572	41	360	48	452	−2	389	−2	501	0	423
Utah	105	2, 267	47	1, 286	103	1, 209	55	757	0	1, 136	7	807	0	930	0	556	−1	453
American Samoa	0	3	0	(3)	0	1	0	(3)	0	1	0	(3)	0	0	0	0	0	0
Guam	0	25	0	9	0	7	0	2	0	0	0	0	0	4	0	1	0	1
Midway-Wake	0	15	0	2	0	15	0	2	0	11	0	2	0	0	0	0	0	0
REGION EIGHT	178	6, 951	420	6, 201	65	4, 996	113	4, 361	13	4, 288	56	3, 812	−4	4, 400	53	3, 625	−3	2, 789
Alaska	0	316	0	198	0	234	0	169	0	214	0	157	−1	210	0	156	0	153
Idaho	16	730	9	414	18	583	18	348	6	443	12	262	0	502	6	285	0	246
Montana	13	1, 085	7	590	26	899	12	490	24	780	19	411	−6	816	−7	455	−4	414
Oregon	100	1, 905	175	1, 819	1	1, 031	30	1, 065	−9	860	29	938	0	790	27	630	0	515
Washington	49	2, 915	230	3, 173	20	2, 249	52	2, 288	−8	1, 991	−5	2, 044	3	2, 082	28	2, 100	1	1, 461

[1] Data contained in this table are net; in some areas activity during the year may be negative because decreases due to demolition of building, recomputation of original capacity, etc., may outweigh increases due to new construction, etc.

[2] Figures may not add to exact totals due to rounding.

[3] Less than 500.

APPENDIX Q.

TABLE 3.—Research funds programed and obligated
Initial obligations (In thousands of Dollars)

Type of research	Fiscal year 1972 appropriations	
	Programed	Obligated
Total	[1] $3,530	[1] $3,449
Shelter Research	975	1,066
Protcetion studies	565	628
Shelter environmental studies	50	52
Subsistence and habitability studies	10	43
Prototype design for life support systems	0	0
Shelter management studies	75	72
Shelter systems studies	275	271
Support Systems Research	1,000	968
Monitoring systems studies	40	45
Communieations and warning studies	175	154
Reduction of vulnerability	0	0
Emergency phase medical research	185	204
Fire effects and protection	262	262
Emergency operations research	338	304
Postattaek Research	680	641
Radiological phenomena and effects	145	138
Radiological countermeasures	90	114
Repair and reclamation of damage	130	109
Postattack medieal, health, and welfare operations	160	109
Recovery and maintenance systems	[2] 155	[2] 172
Systems Evaluation	875	774
Civil defense systems analysis	300	287
Strategic analyses	15	15
Vulnerability and requirements researeh	125	95
Organization and training researeh	215	146
Planning support researeh	10	10
Information systems analyses	0	0
Physieal environments studies	5	15
Soeial and psychological studies	205	206
Management and Support	0	0

[1] Excludes FY 72 activity from earlier appropriations: Programed, $575 thousand; obligated, $521 thousand.

[2] Includes reimbursement from Office of Emergency Preparedness: Programed, $30 thousand; obligated, $8 thousand.

NOTE: Figures may not add to exact totals due to rounding.

APPENDIX R.

TABLE 4.—Federal assistance to State and local governments [1]

Area	Personnel and administrative expenses			Systems maintenance and services, amounts obligated				
	Amount obligated	Political subdivisions		Total	Recurring charges		Education, training and public information	Prog sup and c
		Number participating	Staff		Communications	Warning		
TOTAL	$22, 893, 116	[2] 2, 193	5, 798	$1, 432, 929	$532, 420	$858, 117	$40, 793	$1,
REGION ONE	5, 791, 784	386	1, 364	379, 862	135, 605	228, 080	16, 176	
Connecticut	325, 728	25	74	29, 339	8, 432	20, 081	826	
Maine	333, 201	87	135	33, 607	25, 516	6, 456	1, 635	
Massachusetts	779, 433	58	195	32, 355	13, 530	13, 337	5, 488	
New Hampshire	72, 859	20	33	2, 820	820	2, 000	0	
New Jersey	740, 000	70	193	31, 126	9, 281	14, 409	7, 435	
New York	2, 787, 488	41	435	245, 467	76, 341	168, 982	144	
Rhode Island	186, 000	8	37	1, 985	976	1, 009	0	
Vermont	74, 075	5	24	3, 163	709	1, 806	648	
Puerto Rico	458, 000	72	238	0	0	0	0	
Virgin Islands	35, 000	0	5	0	0	0	0	
REGION TWO	2, 797, 021	239	715	267, 222	127, 528	133, 175	6, 519	
Delaware	89, 099	4	26	2, 607	1, 138	1, 469	0	
District of Columbia	200, 107	0	19	11, 300	11, 300	0	0	
Kentucky	251, 651	46	98	2, 256	1, 261	995	0	
Maryland	515, 490	21	96	37, 649	16, 621	19, 988	1, 040	
Ohio	377, 165	27	99	29, 855	8, 258	20, 256	1, 341	
Pennsylvania	823, 300	58	193	172, 811	86, 755	82, 528	3, 528	
Virginia	402, 709	50	128	10, 017	2, 195	7, 327	495	
West Virginia	137, 500	33	56	727	0	612	115	
REGION THREE	3, 556, 048	384	996	92, 723	29, 850	60, 583	691	1, 5
Alabama	508, 217	58	132	11, 460	3, 360	7, 477	623	
Florida	757, 049	56	194	25, 587	8, 586	15, 402	0	1, 5
Georgia	669, 220	83	191	17, 815	1, 580	16, 235	0	
Mississippi	291, 052	51	104	2, 212	955	1, 257	0	
North Carolina	578, 358	59	159	6, 113	322	5, 723	68	
South Carolina	414, 536	36	108	2, 500	363	2, 137	0	
Tennessee	337, 616	41	108	27, 036	14, 684	12, 352	0	
Canal Zone	0	0	0	0	0	0	0	
REGION FOUR	2, 748, 620	376	753	152, 541	23, 494	126, 922	2, 125	
Illinois	739, 975	144	245	35, 126	3, 708	31, 139	279	
Indiana	167, 718	22	56	8, 414	0	8, 414	0	
Michigan	565, 035	67	119	21, 874	3, 968	17, 906	0	
Minnesota	743, 527	81	202	37, 135	2, 001	33, 928	1, 206	
Wisconsin	532, 365	62	131	49, 992	13, 817	35, 535	640	
REGION FIVE	1, 778, 285	197	506	32, 632	7, 965	24, 667	0	
Arkansas	308, 382	51	112	2, 943	1, 150	1, 793	0	
Louisiana	464, 903	15	106	9, 734	1, 089	8, 645	0	
New Mexico	90, 000	9	20	1, 127	395	732	0	
Oklahoma	310, 000	39	86	6, 991	3, 508	3, 484	0	
Texas	605, 000	83	182	11, 837	1, 823	10, 013	0	
REGION SIX	1, 679, 227	372	620	113, 372	33, 005	77, 904	2, 462	
Colorado	242, 000	33	63	18, 637	4, 059	13, 819	759	
Iowa	300, 000	73	108	15, 255	3, 040	12, 155	60	
Kansas	234, 827	49	88	25, 723	11, 334	14, 269	120	
Missouri	275, 577	66	115	22, 329	4, 644	17, 241	443	
Nebraska	242, 883	43	83	19, 431	4, 359	13, 992	1, 080	
North Dakota	149, 200	50	62	3, 807	2, 338	1, 469	0	
South Dakota	152, 000	38	68	5, 618	2, 125	3, 493	0	
Wyoming	82, 740	20	33	2, 572	1, 106	1, 466	0	
REGION SEVEN	3, 501, 105	119	585	363, 409	164, 237	186, 352	12, 821	
Arizona	242, 810	20	69	16, 292	7, 766	7, 745	781	
California	2, 595, 083	70	397	272, 138	136, 843	123, 840	11, 455	
Hawaii	276, 120	4	36	66, 886	13, 420	53, 007	460	
Nevada	201, 818	14	42	6, 648	5, 282	1, 366	0	
Utah	154, 649	11	34	1, 445	926	394	125	
American Samoa	6, 444	0	2	0	0	0	0	
Guam	24, 181	0	5	0	0	0	0	
Midway-Wake	0	0	0	0	0	0	0	
REGION EIGHT	1, 041, 026	120	259	31, 170	10, 737	20, 433	0	
Alaska	180, 248	3	19	7, 725	5, 000	2, 725	0	
Idaho	106, 665	27	43	227	97	130	0	
Montana	174, 232	50	67	1, 611	236	1, 375	0	
Oregon	114, 516	12	25	982	982	0	0	
Washington	465, 365	28	105	20, 625	4, 422	16, 203	0	

[1] Figures may not add to exact totals due to rounding.
[2] Excludes 55 State level participants.

APPENDIX R.

TABLE 4.—Federal assistance to State and local governments [1]—Continued

Supporting systems equipment, and emergency operating centers, amounts obligated			Surplus property, acquisition cost of transferred property (In thousands of dollars)		Contributions project loans, acquisition cost of property (In thousand of dollars)		Area
Total	Supporting systems equipment	Emergency operating centers	Fiscal years 1957 through 1972	Fiscal year 1972	Cumulative FY 71–72	FY 1972	
$6, 817, 002	$2, 081, 821	$4, 735, 181	$563, 689	$53, 715	$16, 463	$15, 788	TOTAL
916, 385	353, 523	562, 862	90, 912	5, 948	5, 034	5, 034	REGION ONE
30, 370	29, 377	993	9, 166	590	289	289	Connecticut
275, 027	27, 889	247, 138	12, 057	820	720	720	Maine
218, 265	147, 407	70, 858	25, 331	1, 735	810	810	Massachusetts
4, 874	4, 738	−136	3, 859	251	266	266	New Hampshire
185, 227	47, 994	137, 233	15, 154	179	0	0	New Jersey
124, 858	61, 380	63, 478	16, 027	1, 567	1, 954	1, 954	New York
46, 345	3, 047	43, 298	4, 441	528	521	521	Rhode Island
2, 300	2, 300	0	1, 661	50	473	473	Vermont
29, 391	29, 391	0	3, 215	229	0	0	Puerto Rico
0	0	0	0	0	0	0	Virgin Islands
1, 105, 554	205, 693	899, 861	43, 702	3, 447	653	642	REGION TWO
30, 258	28, 880	1, 378	880	85	33	33	Delaware
21, 061	0	21, 061	0	0	2	2	District of Columbia
35, 250	34, 750	500	6, 770	1, 058	100	100	Kentucky
92, 322	53, 982	38, 340	9, 081	874	73	73	Maryland
8, 735	4, 235	−4, 500	5, 933	246	0	0	Ohio
252, 871	64, 515	188, 356	10, 329	191	59	59	Pennsylvania
656, 317	10, 416	645, 901	7, 146	536	330	325	Virginia
17, 740	8, 915	8, 825	3, 562	457	54	49	West Virginia
816, 140	192, 927	623, 213	123, 207	12, 458	3, 012	2, 765	REGION THREE
27, 302	25, 967	1, 335	17, 302	1, 825	363	360	Alabama
74, 943	40, 964	33, 979	28, 393	2, 975	545	442	Florida
102, 376	31, 488	70, 888	26, 347	2, 118	485	372	Georgia
231, 486	52, 948	178, 538	20, 671	2, 484	433	433	Mississippi
233, 388	7, 151	226, 237	15, 877	1, 256	52	52	North Carolina
28, 097	15, 568	12, 529	8, 622	1, 601	432	410	South Carolina
118, 548	18, 841	99, 707	5, 994	200	701	696	Tennessee
0	0	0	0	0	0	0	Canal Zone
1, 108, 674	403, 392	705, 282	65, 179	6, 689	2, 864	2, 857	REGION FOUR
526, 780	168, 474	358, 306	18, 666	1, 927	1, 358	1, 358	Illinois
7, 034	7, 034	0	6, 845	241	126	126	Indiana
8, 473	3, 623	4, 850	28, 932	3, 020	273	273	Michigan
237, 735	148, 930	88, 805	7, 093	1, 110	444	437	Minnesota
328, 652	75, 331	253, 321	3, 643	391	663	663	Wisconsin
862, 332	251, 300	611, 032	86, 233	12, 614	799	799	REGION FIVE
105, 363	39, 680	65, 683	14, 326	3, 374	21	21	Arkansas
10, 604	9, 434	1, 170	18, 654	2, 193	187	187	Louisiana
77, 366	8, 412	68, 954	2, 212	320	160	160	New Mexico
201, 262	140, 051	61, 211	11, 739	1, 457	43	43	Oklahoma
467, 737	53, 723	414, 014	39, 300	5, 269	387	387	Texas
602, 566	392, 001	210, 565	36, 524	3, 219	1, 318	1, 250	REGION SIX
22, 527	16, 708	5, 819	7, 832	788	99	99	Colorado
122, 484	66, 737	55, 747	4, 403	469	382	334	Iowa
83, 952	76, 611	7, 341	2, 684	330	80	80	Kansas
126, 829	82, 034	44, 795	6, 769	343	115	115	Missouri
121, 250	91, 709	29, 541	1, 702	35	119	119	Nebraska
22, 645	19, 951	2, 694	4, 005	485	326	307	North Dakota
94, 864	37, 625	57, 239	4, 688	404	194	194	South Dakota
8, 015	626	7, 389	4, 440	365	1	1	Wyoming
857, 106	254, 079	603, 027	96, 728	7, 442	951	717	REGION SEVEN
70, 614	6, 917	63, 697	5, 165	360	0	0	Arizona
289, 629	72, 117	217, 512	74, 618	4, 985	542	397	California
372, 204	74, 222	297, 982	873	71	86	66	Hawaii
90, 577	88, 301	2, 276	4, 436	435	291	222	Nevada
34, 082	12, 522	21, 560	11, 631	1, 591	32	32	Utah
0	0	0	3	0	0	0	American Samoa
0	0	0	0	0	0	0	Guam
0	0	0	0	0	0	0	Midway-Wake
548, 245	28, 906	519, 339	21, 207	1, 899	1, 832	1, 723	REGION EIGHT
1, 877	1, 877	0	1, 906	77	12	12	Alaska
114, 568	315	114, 253	4, 035	204	33	33	Idaho
178, 273	13, 014	165, 259	1, 490	177	758	648	Montana
26, 974	7, 583	19, 391	4, 696	926	210	210	Oregon
226, 553	6, 117	220, 436	9, 080	515	819	819	Washington

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